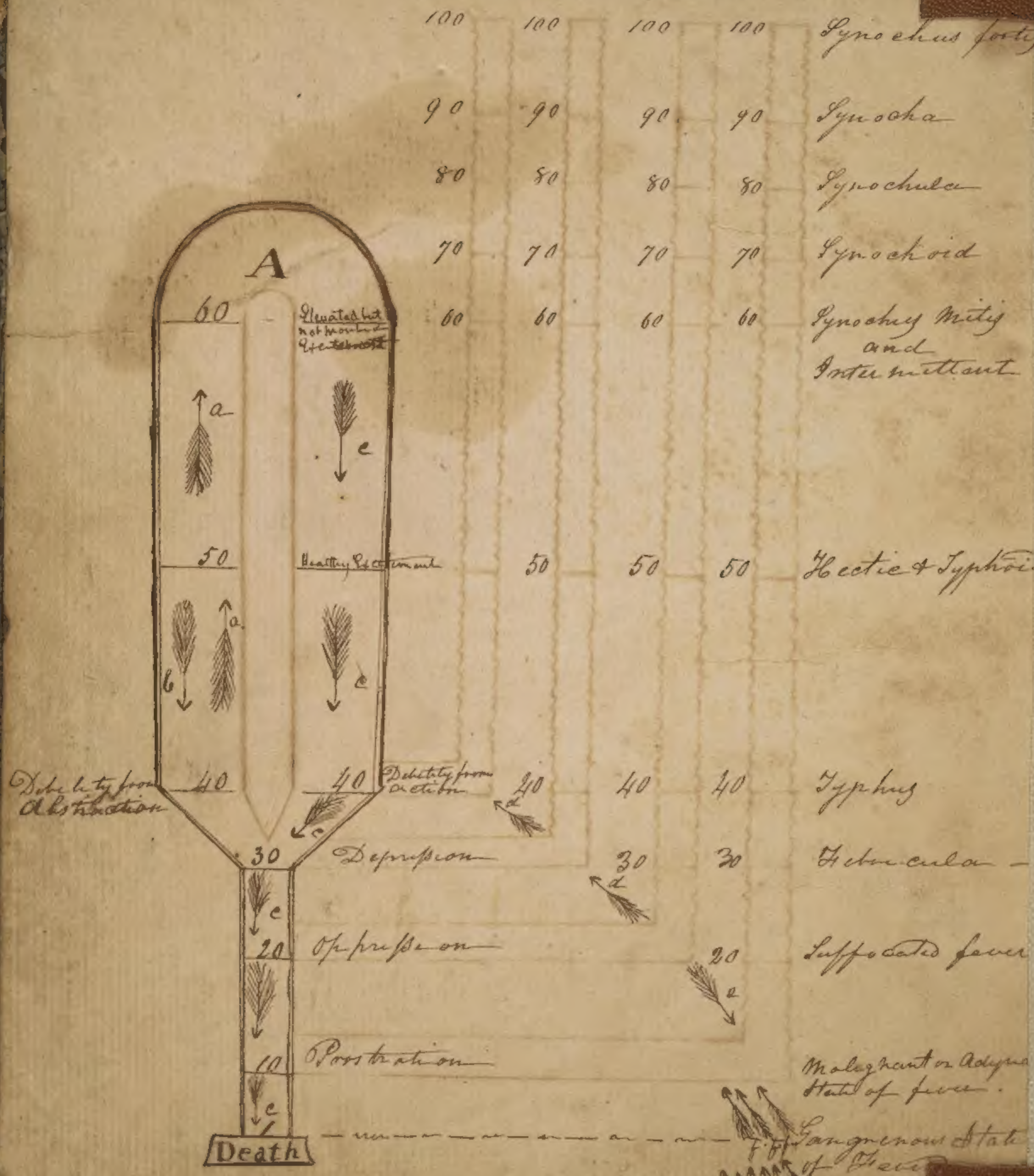


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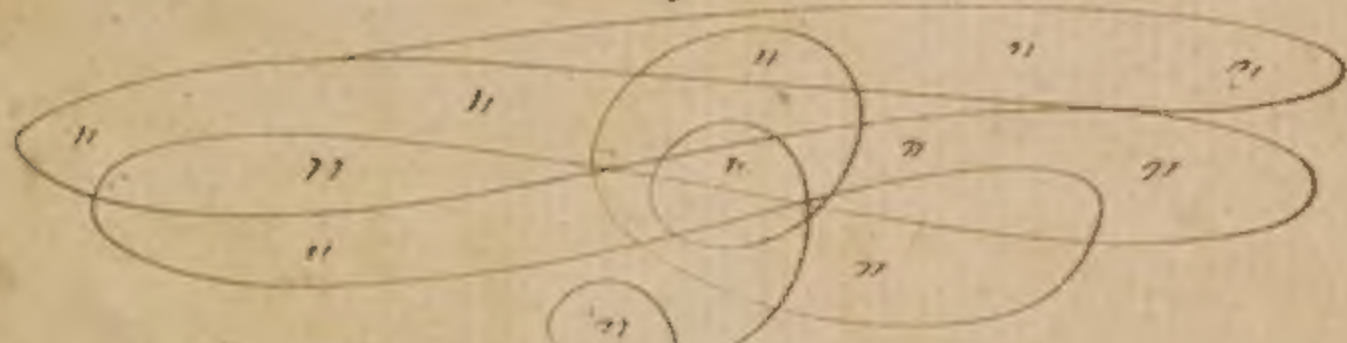
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Table of Fever



Robt. Marshall's

Manuscript Notes
of the
Lectures
of Doctor Benjamin Rush
Delivered in the
University of Pennsylvania
1807-8



References

A Table of the remote, Predisposing, Exciting and Proximate Causes of Ordinary or common fever.
The straight lines A denote the Blood vessels. The arrows a, a, denote the action of Stimuli which induce elevated Excitement.
The arrow (b) denotes the abstraction of Stimuli, & the reduction of the System thereby to the debility of Abstraction.
The arrows c, c, c, c, c, denote the action of Stimuli, in producing according to their force, the debility of Action, depression —
Oppression — prostration & death. The Arrows d, d, denote irritants, which by acting upon the Excitability of the blood
vessels; suddenly accumulated by the reduction of their Excitement, induce Fever. The arrow (e) denotes the abstraction of Stimuli, in
order to favour the system, rising into obvious & sensible fever. The arrows f, f, f, denote the hecificity of powerful Stimuli to excite the blood vessels
from their prostrated state. The arrows g, g, g, g, g, denote the hecificity of still more powerful Stimuli, to raise the blood vessels above the state of Prostration and
Fever. The arrows h, h, denote the irregular or convulsive action of the blood vessels in fever — with the relative force of the 13 primary forms of fever to each other & to healthy action
in the blood vessels. These relations are expressed by numbers ascending from 50 to 100, & descending from 50 to 1.

Be wise to day; 'tis madness to defer;
Next day the fatal precedent will plead;
Thus on; till wisdom is pushed out of life;
Procrastination is the thief of time.

Young

Ms. Codex 89

Debel
Abstr

1807

Dush on Pathology.

December 13.

Hitherto, Gentlemen, we have considered the human body in a healthy constitution; we must now reverse this pleasing scene, and view it in a morbid state. As soon as man was expelled from paradise, he lost the image of his Creator, and became liable to disease and Death. Every Element seemed to conspire against him, in order to work his destruction. Deluge is supposed to assist in shortening the life of man by rendering the air impure.

That life is a for ever state is no less consonant to Religion, than to Reason. It is the result of a continual strife. In entering upon the considerations of Diseases incident to man, let us not arraign the Goodness of God. Diseases are blessings in disguise. They are intended to answer various useful purposes. They induce us to the study of Anatomy. This study, so repugnant to our feelings at first, is rendered agreeable by habit, or necessity. Diseases lead us to the study of Physiology. By knowing the functions in the morbid state, we are naturally lead to the investigation of the functions of the body, in its state of health. They also stimulate us to the study of the Animal, Vegetable, and Mineral Kingdoms in order to discover remedies for our diseases, & lastly they (diseases) give us an opportunity of exercising Charity, that most noble of the Christian virtues.

As the intensity of Cold in Winter increases the
pleasure we enjoy in a Temperate Spring — As darkness
adds charms to light, — As deformity renders
the charms of Beauty more Captivating, — As evil
leads us to good, & as error leads us to the disco-
very of truth; so, Disease is necessary to make us
duly appreciate the inestimable blessings of Health.
Disease improves Virtue. It reconciles us to death.
— nay, from Disease death becomes desirable.
It gives us a proper relish for pleasure. It not only
improves, but creates virtue; and the virtue thus cre-
ated is of a passive nature. Pain also has its ad-
vantages; It promotes activity of the mental faculties
it is the Harbinger of disease, it warns us to desist
from, or avoid all exciting causes, and gives us
notice to send for Medical aid. But disease so-
times comes on without ^{the} remonition of pain, as
Cancer, Chronic Inflammation of the Liver, Trochanteric
limb &c.

Debel
Abstr

In delivering a System of Pathology I am
without a guide. Haller, Hoffman, Boerhaave
& Gaubius, have all wrote upon the same subject
but none of them, however, has given us a System
except Gaubius, and his is so full of Humoral Pa-
thology, that in these days it cannot be of any
great utility. I am aware, Gentlemen of the general
prejudices against Theory in Medicine. It has
been entirely scouted from the Medical Chair

of the University of Edinburgh; but still I am
an advocate for it. — Charles the 12th of Sweden, point-
ing on a Map to a small Town which he had
just taken, said, "God gave me this, and the Devil shall
not take it from me." I say, but not with so much
courage as Charles XII. "Heaven gave me a Love
for principles, & all the powers of the Earth shall
not take it from me."

I shall divide the Causes of Disease into four parts
viz. the remote, predisposing, Occasional or Excit-
ing, and Proximate Cause, or disease itself. Cold is
a Remote Cause, it induces debility, in which the
Predisposition consists: — then if Heat or any other
stimulus be applied it will operate as the Exciting
Cause, & the consequence will be Morbid Excite-
ment, which is the Proximate Cause, or, Morbus ipse.

The order of Causes as here laid down, does
not always obtain. — Debility does not always re-
quire an external exciting Cause to induce disease.
By proximate Cause I mean with Gaubius "Ipsa Mor-
bis, or Morbid excitement. Disease sometimes
occurs without previous Morbid Excitability. This
is an ~~argument~~ argument of no inconsiderable
weight, against the doctrine of Morbid excitability
being the Proximate Cause of Disease.

Debility is the Universal predisposing Cause
of all general Diseases. This is of two kinds, Natural,
& Acquired. We are all born with a greater or less
share of debility, and are of course predisposed to disease.
It is acquired by various modes of Civilized

life. Children require it by injuries received in Parturition from unskillful Midwives. By having their Bodies washed in Spirits immediately after the birth; this produces debility by inordinate Stimulus. They require it by the quantity of their food, which is ~~too~~ often of too Stimulating a nature. tight Cloathing, such as swaddling clothes &c. the dissipation of their Mothers & Nurses, by premature application to Study; the tyranny of their Masters; and by their Amusements. I knew a case of Hydrocephalus internus, ^{caused} by the common, but dangerous practice among ^{children} of standing on their Heads.

By Temperament I mean, a natural pre disposition to disease. Galen has reckoned four Temperaments, viz. Sanguineous, Bilious, Melancholic & Phlegmatic; but I make seven. viz. Sanguineous, Bilious, Nervous, Muscular, Phrenetic, Alimentary and Lymphatic, or Phlegmatic & Cutaneous.

Though I make use of the word Temperament, yet, I object to it, it is improper, because by it is meant a pre disposition to disease in particular Systems and I think the term pre disposition, which I shall make use of in future, is better.

1st Diseases of persons of a Sanguineous Temperament ^{must} seated in the Sanguiferous System, may be subdivided into two kinds — Pulmonary & Aortic. In the Pulmonary the lungs are preternaturally enlarged. They may be diseased, and the Aorta refuse to sympathize.

2^d. In the Bilious temperament, the Liver is preternaturally enlarged, & secretes an unusual quantity of Bile. These temperaments are often blended together. They predominate in Warmer climates. The Bilious temperaments predominate in Hepatitis, Cholera, and all the intestinal forms of disease. 3. The Nerves, Muscles, and Mind have each a particular Temperament. In the Nerves, sensation is quickened. Persons of this Temperament may be said to be all Nerves. This Temperament applies to Hysteria, Hypochondriasis, Epilepsy &c. Persons of the Muscular Temperament, are remarkable for their Strength. They possess but little Sensibility. They enjoy repose, if I may so speak only in active employments. Hercules was renowned for bodily strength; but not for the Strength of his mental powers; such people may be said to be all Muscle. 5. In persons of the Phrenetic Temperament, or what I should all along have termed, predisposition, there exists undue excitability & quick perception, all the Operations of the Mind are performed with Celerity and force. This predisposition always exist in those persons, who are liable to be affected with Head Ach, Hysteria & Epilepsy. — Cephalic occupies the lower part of the Brain, while the Phrenetic occupies the upper. Persons possessing this Predisposition are generally short lived. — Hence the saying of old Women that "Children of uncom-

"men talents never live to scratch a gray head."

They have been aptly compared to a sword too large for its scabbard, which cuts its way through. If they are deprived of Books, delirium or Mania is the consequence. They feel pain, when not engaged in reading or interesting conversation — such may be said to be all mind. 6. Alimentary predisposition may be subdivided into Gastric and Intestinal. 7. In the Lymphatic or phlegmatic, the Lymphatic system performs its functions slowly & imperfectly from debility. The cutaneous predisposition exists in such persons as are afflicted with inflammation on the skin from slight irritations.

The same remote cause acts differently according to the difference of predisposition. This is exemplified by a case related by Dr. of four young men, who partook equally of violent exercise under equal circumstances. They were all seized with different diseases, at nearly the same time, because their predispositions were different. The very same Epidemic often appears under different forms in different people, for the very same reason. From these facts it will appear evident, that no general rule for the preservation of health will universally hold good. Different predispositions succeed each other, in the same person, at different times. They vary with age & season, and are

Dr. A. L.

Sometimes Connected, thus the Nervous & Muscular
Predisposition predominates in Infancy & Childhood,
hence Convulsions &c. In Middle age. It is the
the Arterial & Hepatic; hence Inflammatory and
Bilious fevers, peculiar to those ages. In old age
the Nervous & Cephalic Predispositions reign - hence
Vertigo Head Ach. &c. The Sanguineous predis-
position prevails chiefly in the Spring; the Bilious
in Summer; the Nervous in Autumn; and the
Phlegmatic in Winter. Predispositions are often
dietary depending from Nature to some degree.
in Generations; and may be changed in tem-
peraments. The reason why the diseases of the
seasons are more uniform, is because that sea-
son is more insulated than any other portion.

In prescribing for a Patient we should have
more sight of his Predisposition. We should always
accommodate our prescriptions to their peculiarities.

I have now a Patient under my care, whose bowels are so in-
tractable or not to admit the use of Purgatives. I
need him. The Sanguineous Predisposition re-
quires Copious Bleeding; the Bilious Copious
Purgings; the Phlegmatic, Abstraction from Study,
the Muscular the most powerful Sedatives.

At present, Life, but Health is a forced State, per-
fect Health is as rare as perfect virtue or Reason.
But do not be discouraged. Gentleness, at this dis-
tressful view. The part may be rehabilitated.

another possible an unnatural degree of strength. A Hypochondriacal patient may have vigorous Lymphatics. Hysterical women discharge an internormal quantity of Uric Oxide.

Debility is Acquired by all the causes which tend to diminish natural excitement at periods anterior to childhood. It may be done by reducing the excitement & expending the Excitability by unusual Stimuli, or in other words by suffocating it.

December 15th 1864 — Health consists in a true equilibrium between Excitement and Excitability. Stimuli when too powerful produce a debility. Thus I call Debility from Action. It is the same as the Indirect Debility of Brown. — When the Natural Stimuli are diminished, that debility, which I call Debility from Abstraction is produced. This is Doct Brown's Direct Debility. You see that the two extremes meet in a point.

When Excitement is suddenly reduced, Excitability is suddenly accumulated, but when the reduction is gradual, the Excitability is expended. There is a great difference between Debility suddenly induced, & that which is brought on gradually. In the first Stimuli are injurious, may, even fatal. In the last they produce beneficial effects.

In the Morning the Excitement is at 40° in

Noon. 50° and at Night 40°. So that we are
warmer in the Morning, and at Night, than
at Noon. Hence it is that the Air of the Morn-
ing and Evening is the most apt to produce
Disease, especially when aided by an Exci-
ting Cause. There is a certain range in debi-
lity which resists disease & happy for Mankind,
it is so, otherwise whenever debility is induced,
Disease would be unavoidable. Old People
& Children are soonest debilitated. Even the
Common Operations of the Mind are sufficient
to produce Depressions & Disease.

When Stimuli are long continued they ex-
haust the Excitability, and Disease is seldom
the consequence; but disorder is produced. —
Debility is an unit, as also depression. Persons la-
bouring under Debility, are capable of Exercise;
but Depression forbids action: It appears to form
the connecting medium between Debility & Disease.
Debility is not Disease. Abnormalities sometimes
induces depression, without intervening Debility.
Depression is most frequent, about Christmas,
when according to the language of the celebra-
tion "we are all a little bit of a beast."

"Man, falsely grateful at the sacred feast,
"To do God honor makes himself a beast."

"If you go out in the Morning, or Evening lie

excite to avoid all exciting causes. Is the System
unduly excited by the miasmata present in the
Blood-vessels? Be cautious of the least excess of Stim-
ulus (in this Condition, in Wine or Exercise. Are
you seized with Signs of Depression? Pause, for you
are on the threshold of Disease. When labour is
constant Disease is avoided — because the Exci-
tability is exhausted, & there is ~~no sickness~~ none
remaining for Irritant Matter to act upon. There
is no sickness during harvest; but as soon as it is
over, Diseases begin to appear, because the Ex-
citability which was expended is renewed. The Exci-
tability accumulates before the Exertments and
any Irritant may produce Disease.

Physicians seldom take cold when constantly
employed. If employed till midnight they escape
Sickness, but if after a few hours sleep, they go out,
they generally feel the effects of ~~it~~ it. Our con-
stant care should be to preserve a due degree
of Excitement by our dress, diet, Exercise, &c.

It is not always necessary for External Sti-
muli to act on Debility from abstraction, in
order to produce Disease. — Convulsions some-
times arise in consequence of the System bud-
dily losing its equilibrium. The Excitation
it does not more certainly attract lightning
from the clouds, than Debility invites

Depression, and Depression, Disease. Lord Cornwallis was heard to observe that during his Campaign in the Southern States, he had never encamped half an hour, before the weakest part of his Encampment was attacked by Gen. Harry Lee, just so it is with Disease & Debility, Gentlemen, Diseases are all Harry Lee's. They always discover some weak part & there make their attack.

Exciting causes however diversified, are all an Unit all Stimuli. None is produced by various causes; but it is the same, whether produced by friction or percussion. Disease consists in morbid Excitement, not Depression; for Excitement may be excessive & not morbid. There is but one Disease! I repeat it, Gentlemen, there is but one Disease! I again repeat it,

There is but one Disease and that is Morbid Excitement. Neither Gentlemen! is there more than one Exciting Cause, and that is Stimulus. Disease is always partial. I know of no general disease. It may occupy several parts at once; but not the whole system. There may be Disease without pain, but when there is pain, there is always Disease. The worst of obstructions sometimes take place without pain. The Liver has been known to suppurate without the promission of pain. If the Excitement occupied the whole system at one time, it would be a state of debility. I say again

Disease is an Unit. No matter where it is seated, still it is morbid Excitement. It has been objected to this Theory "that disease may exist without morbid Excitement attending it. But these are not diseases — they are only the effects of Disease, ~~which~~ they are what I call disorders. An example of this may be adduced, for instance, as in Schirrhous Tumours, Inflammations &c. These are only the effects of morbid Excitement.

As Health is the result of general Excitement, 1. Disease depends upon partial Excitement. — Brown has very improperly confounded debility with disease, when it is only a predisposing Cause. — That Debility is not Disease, is evident from the well known facts, that it exists in Children, & Old People, who are not in a Diseased State.

James Esq. Gentlemen, how widely I differ from Dr. Brown. He admits that there are two kinds of Disease (viz, Spasmodic & Asthenic). I say there is but one. I have one Disease. The Plan of Cure laid down by him, is almost entirely stimulant. Mine is always depletory in proportion to the violence of the Case, & then proper Tonic.

December 16. 1807. I might strengthen this Theory by tracing its Analogy to physical Excess. ~~It is~~ as well as Disease is an Unit. It may be accompanied with a North Wind, with

an East wind, South or West wind; with
rain, Hail, or Snow, or all of them; it is still a
Storm, and depends on the same cause, viz. Morbid
action in the Atmosphere. I might still go
further, and trace its Analogy to Moral Evil.
We all come into the world with a greater or
less propensity to Vice. From Morbid Excite-
ment, Nature produces various forms of disease.
1st Convulsion, as Tetanus, Epilepsy &c. The Mus-
cles being chiefly affected. 2. Spasm, as in Colic,
Tetanus, Cramp &c. There are two Species of Spasm,
viz. Tonic and Clonic, the first is continued, the
last is accompanied with interruptions. 3^d Fe-
ver, natural Heat. To this the internal parts & skin.
4th Itching. The skin about the Navel, pudenda
& Arms, are particularly disposed. 5th Auras—pudenda
Shocks attended with pain, occur in the Breast,
Head, & Limbs; what the French call "Le Dolorique"
I call it "Aura Dolorifica" — Aura Antelithica.
6th Suffocated Exertiment. Here Exertiment is con-
centrated to one part. An absence of pain and
pulse attend it. This is the most dangerous
form of Disease. The Brain & Lungs are most
commonly the seats of this form of Morbid Ex-
citement.

I would not be understood, to limit Morbid
Exertiment

convenient to these forms. But were its varieties more numerous than they are, yet they would all of them have a common cause. Fire appears in very different forms, viz. in red, white, & blue flame. Again it appears without flame, it assumes different actions, viz. in melting, softening, hardening, calcining, evaporating, vitrifying, fusing &c. Yet we do not call it red fire, melting fire, softening &c. — we see something like the effects of Fire in disease. The skin assumes various colours, white, red and blue. There is something like sparks in Auras. Morbid Excitement and fire are however, not the same. Surely infer from the unity of Fire the Unity of Disease. The Morbid forms above mentioned, are sometimes mixed and often succeed each other. We have seen a hail, rain & snow storm all at once, we have seen a storm of rain succeed a storm of hail or snow. But Morbid Excitement action on the atmosphere is the cause.

From all that has been said, Gentlemen, you will see the impropriety of affixing a Specific, or etiological name to every possible grade of excitement. It is my aim to abolish idolatry in Medicine, as it certainly renders Medical knowledge. This is the School in which shall flow Health & Happiness to every part of the World.

All the Articles of the Materia Medica. are
not required to cure Morbid Excitements. Disease is
that & a few remedies will answer. If every disease
had a Different proximate Cause; Different
remedies would be required of course. — But
this is not the Case.

Is Debility the predisposing Cause of all genera-
al Diseases? Remove it before disease is formed,
by Rest and proper Medicines, improved with a know-
ledge of this fact, I have often, often prevented
Disease. — Does Depression supervene? Remove
it by a small Bleeding, Abstinence, & a Purgative.
Remove it always & you will produce disease?
Place your patient beyond the reach of Excitement
& Disease prevented? Quia vis. Exalta-
ment by Distraction. Is Disease an Unit? is it local
in the Pleura? Does Depletion Cure it? The same
remedy in other parts of the body will Answer. — Is
Small Pox rendered mild by previous preparation?
So may other Diseases. — Can we prevent Suppuration in
the Liver by Facilitation? So, also we can prevent
it in the Lungs in Consumption, by exciting a Vica-
rious Disease. Does Abstinence mitigate the vio-
lence of the Small Pox? So also will it in Measles,
Yellow Fever &c. Is the same State of the System always
attended in the same State of the pulse? The same
remedy must always be exhibited, in similar States

of the pulse in all Diseases. I do not mean the same force of the same remedy.

His Theory is in fact, no theory at all. - It is a History of the Phenomena of Disease. It is a chain of facts obvious to the Senses. It limits the number of remedies. It circumscribes the Materia Medica within narrow limits. It banishes the Liver - roots, Spleen roots, Lung roots, Brain roots, &c. The extinguish fire in all its forms by abstracting Air; throwing water upon it. So can we destroy an extinguish disease by depletion, (i.e.) abstraction.

The same knowledge in navigation, which will carry a man to the West Indies, will carry him to all parts of the world; and the same knowledge which enables you to cure one part of Disease, will lead you, if a little modified, to cure the whole. — " — "

You who have brought with you the writings of Brown & Huxham will lose a great deal by exchanging them for mine. For one theory which I give you, Brown would give you two, Huxham twenty. I shall not wear of a parcel of papers, which only serve to perplex you. - In short, to answer, I'll empty your pockets of a parcel of papers, & fill them with Silver & Gold.

December 17. 1807. In pneumonia of the lungs the Blood vessels do not pump. It is the same

So high, they are so engaged as not to take on in-
flamatory action. Equalize Morbid Action
by Abstraction, & then the vessels will beat to the
time of Inflammation.

We have said that Pathology is a Science
that treats of the Causes, Seats, & Signs of Disease.
Having treated of the Causes we now come to treat
of the

Seats of Disease.

If the Lecture I have delivered be correct
our exact knowledge of the seats of disease is not very
large. Some diseases may be excited without
any signs of disease without fever or pain. Certain
Actions produce Signs of Disease in parts of the body
remote from that part, in which the disease is seated.
Doct Johnson calls this an intercommunication of
action. How many diseases of the Brain are induced
by diseases of the Stomach & vice versa? Great care
then occur in forming a judgment of the Seat of
Disease. I once attended a lady, who laboured under
almost constant vomiting, and black bile was discharg-
ed from her bowels. Her menses were regularly ex-
creted. Her disease was supposed to be seated in her
Stomach & bowels. After her death, I obtained leave
to open her body; I found that the greater part
of the Stomach & Intestines were in a natural state.
I was also
of a man, who had a violent pain in

his right Kidney, supposed to have been caused
by the presence of a stone. On Dissection, the
right was found perfectly sound. while the
left contained a large stone. These cases prove
that we cannot with certainty ascertain the seat
of disease at all times.

But will not Dissection give us a knowledge
of the Seat of Disease? No, I would not be un-
derstood to dissuade you from frequently dissec-
ting Morbid Bodies. I have read Morgagni
& Astruc, & Bailey's Morbid Dissections with
instruction. I do not entirely reject the knowledge
of the Seat of disease. When Inflammation is seated
in the Brain we should know it soon; for it affords
more prompt relief, than when it is seated in the
Lungs. Is there no sign of internal disease except
pain? In the Army (— holding up his Army) the
Capt. there stands a Centinel, who is a faithful
reporter of internal affections. But if the patient
be dead, what then have we to guide us? A sense
of heat, dryness, the State of the Tongue &c. The
pulse is the Nosometer. It is the index plate of
the System. — A knowledge of the seat of Dis-
ease, the difficult, is not unattainable. This know-
ledge is not necessary under my Theory. I have
discovered the presence of Disease by the Pulse
&c. — the patient made no complaint. I once
thru a lady on what I shall call a stomachic
in Cochin. I did not know the seat of the

disease; nor did I care for it, as I knew the nature of it. I bled her ten times, purged her daily, & finally cured her. Similar instances of Ignorance & Success, often occur. The whole Circulatory System is an Unit; & between every part of it there is an intercommunication of Sensation.

Of the Signs of Lislell.

The Relations, Sympathies, & Absorptions of a diseased body are very different from what they are in a healthy state. They differ from Idiosyncrasies. The Signs of disease are different in different ~~various~~ ~~amount~~ parts, according to the difference of pre-dispositions. They differ also in different Climates. Many violent forms of Disease are attended with no Pain. Pain, however, cannot exist independent of disease. It is not always proportionate to the disease which excites it. It is an Unit; but is attended with different Sensations, according to the part in which it is seated. In membranous parts, it is dull. It is twisting in the Bowels; hence the Latin properly says "Dix is torminibus torquatur". Pain is jumping in the Teeth Gnawing in the Bones, some over the Scalp, after Head-ach. Thaving on the skin like a drawing knife. Binding in the Temples. It is successive & depends on a variety of morbid Excitement.

Vertigo is a sign of a predisposition to
Apoplexy; Coarctation of the Arteries. We are to
look for the Signs of disease. 1st In the State
of secretions, 2nd In the Tongue 3rd In Respiration
4th In the Countenance 5th In the
State of the Body. 6th In the
State of the Muscles. 7th Appetite. 8th In
the State of the Mental Faculties. 9th In the
State of the Body with respect to its Heat.
But the Pulse affords the most correct indica-
tion; & in it we must chiefly depend. The Blood
occupies the highest rank in the Humor
System. — " —

December 18th & 19th. 1857. There was a
course taken up in repeating the Lectures de-
livered on the 9th of Nov. on the 8th of Dec. — It
is in substance, as follows.

Diagnoses of diseases have
been exclusively upon the Tongue,
the Countenance, and the Excretions, by Sweat,
Urine, & Urine, in forming a judgment of
diseases. — I reject none of these; but rely
principally upon the Pulse. The first men-
tioned, no doubt, greatly assist in indicating
the State of the System. But the Pulse is

the best claim to the title of Nosometer.

I hope that our pupils will be dis-
tinguished, wherever they go, by their particular
meditation for, and attention to the
Pulse.

As the Blood Vessels occupy the highest
rank in the System, on the Pulse we ought
chiefly to depend, whenever we are to judge of
the degree of disease. It is to the Body, what the
Dial Plate & hands are to a Watch. We are
to consider its natural, & then its morbid States.

In an Adult, the Pulse beats from 60, to
80 strokes in a minute. Its medium is 66. But
there are many circumstances which vary its fre-
quency. 1st It is influenced by Age. - At birth,
the Pulse is from 130, to 140. After one year, from
108, to 120. At two years, from 90, to 108 at six years
80, to 100. At twelve, the same as in Adults.

2nd The Sex has an influence on the Pulse. It is
quicker in Females, than in Males. 3rd Different
States of Society vary the Pulse. It is quicker in
Cities, than in the Country; And slower in
wages than in Civilized people. Of the Indians
whose pulses I examined, in the presence of
Dr. Caldwell, & Dr. Fisher of Virginia; but two
afforded an Exception to this rule, and one

of these. I found upon enquiry to have been
sitting by the fire. The other was the Son of
a Frenchman, by an Indian Mother. —
I wish you to pay attention to this remark,
Gentlemen, because it has been falsely contra-
dicted by M^{rs}. Volney, in his view of the
United States. He says D. Barton was present,
which is not so, & the only Indian witness
which M^{rs}. Volney examined, was that of the
famous Indian Chief, Little Turtle, who
has a portion of civilized blood in his veins,
and who had probably for several years, lived
in the same manner at home, as when Ab-
solved. 4th Fire has an influence on the pulse
it is quicker in short, than in long persons. 5th
It is slower & slower as you approach the pole. It is slower
in cold, than in warm latitudes — Quicker
in Summer than in Winter. The pulse of
the Greenlanders is 40. 6th The pulse is differ-
ently affected by different times of the day.
It is slowest in the morning, quickest at
noon, & slower at night. It is slower in
the sleeping than in the waking state.
I attribute its slowness at night, to a differ-
ence in the weight of the air. Not a differ-

mer in the Thermometrie, but in Baro-
metrie, State of the Air.

"Before I begin to speak of the Morbid
State of the pulse, I'll deliver a few Physi-
ological propositions. 1st The Heart possesses
irritability which disposes it to contract upon
the Application of Stimuli; particularly
that of the Blood. It is so intimately connected
with the Arterial System, as to form an integral
Union; in consequence of which, the motions of one
part are communicated to all the rest. It may be
compared to the sensitive plant. If one leaf is
touched they all fall - Or more properly to
the Bells worn by the Jewish Priests; one of which
being shaken, they all ring in unison. I had
an opportunity of seeing this amply verified in
the case of a certain Mr. Wicks. His Arteries
~~being~~ ^{being} ~~in the~~ ^{in the} ~~was~~ ^{was} ~~swelled~~ ^{swelled} and pressed upon the
Arteria descendens. The whole System Sympathized
with this diminution of a principle Vessel, &
produced a small, contracted & scarcely percept-
ible pulse. I also attended in consultation with
Dr. Physick a Captain Haidy. His pulse was
small & jerking, what I have called an An-
eismatic pulse. I enquired of Dr. Physick if
there was no tumor about his Body, and

upon examination. The Doct. found that he had an Aneurism in the Carotid Artery. This furnishes a clue to the discovery of almost all diseases, by way of the pulse.

Is the pulse tense in acute Pneumonia? The same tension occurs in Inflammation of

Pleura, and the Membrane investing the Lungs. Is the pulse soft in Peripneumonia

nota? It is because the vessels are so engorged that they cannot put on inflammatory action.

Is the pulse small in affections of the Stomach & Intestines? It is because the vessels in these

parts are small. Interruptions of the pulse may be accounted for in the same way. The

case of Mr. Mulenburgh, which came under my care afforded a remarkable proof of this.

His disease was Hemiplegia & his pulse intermitted, invariably, after every 6th & 11th pulsation.

What is still more remarkable, the number of strokes in each minute was exactly 80.

There are however, instances, in which the pulse refuses to sympathize with the general system, & of course, ceases to afford a true

indication of the state of the disease. But this is no argument against the importance

of the pulse. There are instances, in which

the Needle ceases to afford sure guidance
to the Mariner — yet this has not banished
the use of the Compass. 2nd. The pulse becomes
doubtful, as a Criterion for what I shall call sup-
posed excitement. This is removed by Bleeding;
by which the Blood vessels are enabled to play (if
I may be allowed the Expression) to the tune of In-
flammation. 3rd. From a disordered state of the
pulses of the Radial Artery. 4th. From Idiosyncrasy.
5th. From too much fat. 6th. From accidental Mus-
cular pressure. 7th. From Exposure to cold, which
is a sedative & diminishes the action of the Arterial
System. 8th. From a want of irritability. 9th. From
disorder in the heart, and lastly, from an un-
excited state, or in palsy &c. The pulse is sometimes
more quick & more frequent than at others. You
observe that I draw a line of distinction between a
general and a frequent pulse. By frequency, I mean
the greater or less ~~number~~ number of pulsations in
a given time. By quickness, the greater or less time
in which the pulsation is performed. A pulse
may be frequent, & not quick, & quick without
being frequent. It varies greatly in point of frequency;
I have known it rise as high as 170, and even 220,
and descend so low as 40, 30, 20, 9, & even 7 in a
minute. 14th. Pulse is often irregular. It is so

in Malignant fever, and in old age. A perfectly regular pulse in old age, is a sign of disease. It is also various in force & regularity.

Now, Gentlemen, proceed, to speak of the morbid states of the pulse which occur in fevers.

First of the Depressed pulse. It is sometimes prostrated naturally frequent, and at other times low, & sometimes, even imperceptible at the wrist. Again, it is natural as to frequency, yet depressed. It is either partial or general. It occurs in plague, yellow fever, Malignant Small pox, & bloody. It is occasioned by the force of Stimuli; prostrating the Blood vessels below the point of reaction. As stimulus is removed, & the pulse rises. It may be compared to a willow which bends beneath the blast, but when that force is removed, it springs back, & recovers its erectness unhurt. So that we distinguish the depressed from the weak pulse. I answer. 1st from its occurring in the beginning of disease; or in the paroxysms of such diseases, & is periodical. 2nd By its impacting when there is a compression of tightness to the sinus. 3rd By occurring in Affections of the Heart, Brain, Stomach & Liver. 4th By occurring sometimes after bleeding. It is happened from the action.

having been let loose all at once, & producing
a rapid flow. 5th By its being often protracted
slow, or intermitting.

2nd The Suckey Pulse, small, tense, and quick; but
not frequent. It imparts a sensation like that of a
piece of cat gut; hence it is also called the Cat gut,
and the corded pulse, I have called it the Suckey
pulse, it conveys an idea of resuscitation. It
occurs in malignant fever.

3rd The Synochus pulse. This is the reverse of the
two former. It is full, frequent, & quick; but has
no tension. It occurs in Bilious & yellow fever, also
in congestions of the Brain.

4th Synocha pulse, full, quick, frequent and
tense. It occurs in inflammatory fever. Pleurisy
& Pneumonia.

5th Synochula pulse. Small, frequent, quick
& tense. It imparts a sensation like that of a
small quill. It is a contracted Synocha, & occurs in
Chronic Rheumatism & Gout.

6th Synochoid pulse. It is a compound of Syno
cha, & Synochus. It is partly tense & partly soft, like
a quill that has been trodden upon.

7th The Typhoid pulse. This is full, round &
tense — a grade below Synochoid. It occurs

in the beginning of the Fall, Hospital, and
Ship fevers.

8th The Typhus pulse. This is a weak & small
pulse, which occurs in the latter stage of some
fevers, & sometimes in the beginning of Malaria
and fever. In speaking of the Depressed
pulse I compared it to a Willow, bending be-
fore the wind, but rising when that was over.
The Typhus is the reverse of this. It may be com-
pared to a shattered & broken down reed, which
is only to be raised by the hands of Art.

9th The Hectic pulse. This is very rarely Synocha
or Synochus — frequently Synochoid, often
Synrhoid. It occurs in Phthisis Pulmonalis, Chro-
nic Gout, & Ulcery.

10th The Hobbling pulse. This is unequal and
intermitting. It may be divided into three species,
1st, when one, two, or three small strokes gradu-
ally succeed a full one. 2nd When it passes
from great force, to great weakness, & vice
versa. 3rd When it passes from frequency to
slowness, and from slowness to frequency.

11th The Double pulse. when at short intervals,
two distinct pulsations are perceived, one al-
ways weaker than the other. when the first pul-
sation is strongest it is called Discrete, when

when the last pulsation is strongest, it is called Caprusans. These are seldom met with & are not important.

12^{ly} The Serrated Pulse, conveying the sensation of one part being elevated above another, like the teeth of a Saw.

13^{ly} Vermicular Pulse. It is a small frequent pulse, resembling the Successive motions, or windings of a Worm. Hence the term Vermicular.

14^{ly} Crawling Pulse. Is small, weak & scarcely perceptible, it occurs in the last stage of Disease.

15^{ly} & lastly. — The Natural Pulse. There is an apparently Natural Pulse, occurring sometimes in the highest grades of Disease, when it ceases to be an index. This is always very dangerous.

I have thus, Gentlemen, enumerated the different Pulses that generally occur in fevers. — But you are not to expect that these will be found uniform. They are most frequently combinations. First. You will find a two fold combination. It is at the same time quick & frequent, depressed & weak, slow & intermitting. Next, you will find a three fold combination, full, strong, & quick, at the same time. 3^{ly} It will be four folds — full, strong, quick, & frequent, at the same time.

The pulse often varies when there is no Febrile action in the System. 1st It is full and bounding — Next, It is weak and slow, and it is distinguished from a depressed pulse, by occurring in a weak state of the Body; and in Convalescence when Debility alone attends. I shall hereafter prove that Debility is not disease.

There is an anurismatic pulse, which imparts a sense of jerking to the fingers. ^{The} Pulse might be divided into ten Grades, five above & five below, for. C. might be considered as the Healthy Standards &c.

Having treated of the variations of the pulse at large. I shall proceed to Give you a few directions, Gentlemen, for feeling it. Never take hold of the patients wrist immediately after entering the Sick Room. Neither speak to him, for conversation accelerates the pulse. But first sit down, pull off your Gloves, and warm your Hands if it be winter. Apply four fingers to the pulse at once. You will thus have a more perfect Sensation, than by using one singly. When much Nicety is required in the Case, suspend Pin-scion on the eyes, by shutting them; & in the ears by ordering

Silence in the Room. Thus you will counteract all feeling; or as Dr. Darwin would call it, all "Sensorial power" in the ends of your fingers. When the Pulse cannot be felt at the wrist, the temperal artery should be resorted to. The Pulse should not only be felt in order to judge of the promuity of Blood filling; but always before the following Remedies are prescribed, viz. Opium, as well to judge of the promuity of its use, or to regulate its dose. I have known five drops of Laudanum to produce the same effect, that would require 25 in a different state of the System. Vomits, Purges, the Hot & Cold Bath — the pediluvium — Bark, Chalybeates — and Stimulating drinks. — It is the practice in Europe, to make use of a Stop Watch to determine the frequency of the Pulse; But I hope it will never be in the United States; because it will draw the attention from other States of the Pulse. I would recommend the quarter of a Minute Pulse Glass in preference to a Stop Watch, for they are seldom good.

You need not be averse to admitting every thing I have said on this Subject, for here is no Theory, or Speculation whatever

It has been said that a knowledge of the pulse is of difficult attainment, and that it requires as nice a sense of touch, as of the Ear for a taste for Music. Mr. John Hunter was of this Opinion, and assigns as his reason for this belief, that his brother, William Hunter never could acquire a knowledge of the pulse. I am of a different Opinion, I think that it may be acquired by any young man of common understanding, and that in the time employed in the common course of Study.

I shall conclude this Lecture on the pulse with this observation. It is said of Plato that he inscribed over the door of his Academy "Let no man enter here who does not understand Geometry." Had I to erect a Temple to Medicine, I would not have inscribed only on the front door but on every of the Apartments, "Let no man enter these walls, who has not a perfect knowledge of the pulse. — " — "

(Lecture 2^d, 14th Nov. 1844. From Gentian Gentianus.)
treated of the Immediate cause of Disease, together
with its Local & Signs. Now, I come to speak of
the Remote, Predisposing & Exciting Causes.

The moment in which receives its breath, it
also receives the innocent of Death as Nature con-
fidently expresses it.

"Old man, perhaps, the moment of his Breath

"receives the lurking Source of Death,

"the young disease, which must subdue at length,

"grows with its growth, & struggles with its strength.

I have said before, that children are predisposed
Naturally to disease, sometimes from injuries during
parturition; from the baneful practice of washing
them immediately after delivery; from premature
upliftation to Study; from Amusements, such as
jumping, standing on their head &c. &c. Most
of our diseases are derived from the Insensible re-
sults of the Atmosphere; such as Miasmata, Human
Effluvia, the Harmonies. Winds, & certain unknown
matter in the air, the smoke of certain sub-
stances when burnt; the smoke of certain Manu-
factures &c. They are also derived, from the Physical
qualities of the air, these are Heat & Cold, rarity,
& density, Dampness &c.

Heat & Cold are relative terms, & extremes
of both are injurious. Heat exceeding the degree

of Heat by Excitement, produces Lability from
action; which first shows itself in the Animal
System. Heat is an universal Stimulant, ac-
cording to Dr Caldwell, the temperature of 80°
of Fahrenheit disposes to Yellow Fever, more than
any other. When Combined with the rays of
light, it produces Insolation. Eleven thousand
people were destroyed at Pekin, by the disease
of Insolation. Heat acts also on the Arterial
System & produces the frequency of the Pulse in a
fever. It produces excitability of the Muscular
fibres, produces Languor & Lability of the
Nervous System, increases Absorption. Heat
increases Sensibility; acts on the Mental Faculties,
producing Weakness of Memory. It
acts on the Alimentary Canal, producing ex-
citement & then defect of Appetite. It increases pers-
piration, then dries up the Skin; production
of Cutaneous diseases. It gives the feverish in-
crease of a centrifugal determination, hence
Buboes in Yellow fever, &c. It discharges the
white Colour from the Skin, hence the dark
colour of the Skin of Blacks & Indians. But
diet, disease & states of Society influence
Colour. Heat disposes to Cholera & Dysentery,
& increases the Secretion & excretion of Bile.

Hence Complaints arise from a redundancy of bile in Warm Seasons. Heat invigorates the General Appetite. It has been justly observed that there are a greater number of Births in the Winter than in the Summer or any other season. Heat acts upon the Eyes producing Ophthalmia, Gitta Serena, Cataract &c. It promotes the discharge of the Menstrues. Hence females Menstruate earlier in Warm, than in Cold, Countries. Heat lessens the density of the Solids. By inducing Languor, it disposes to the use of Opium, Tobacco, &c, & lastly, by the great depression it produces. it is sometimes fatal. Heat is less friendly to old than to young people.

I now proceed to speak of the relative effects of Heat — When preceded by Cold; it produces Depression. After the expiration of the Siocco winds, which pass over immense beds of Sand, & become heated, the temperature fell from 112° to 80° — A moderate Warm day in March will produce depression; the Excitability being maintained by the previous Cold. The sudden Abstraction of heat may produce fever by destroying the Equilibrium of the System. Heat when applied, produces insensibility to Cold. Hence

The increase or excitement from heat which, after the dry application of Cold, reduces the irritability, and increases excitement. Our hottest Summers are the most healthy; but the following or succeeding Autumn is the most unhealthy. The one season generates the disease, the other produces it. The body suffers more in passing from heat to cold, than from cold to heat.

Dry Summers are production of Inflammatory diseases; but wet seasons produce Malignant diseases. Weather, Uniformly Moist, Dry or Hot, is not unfriendly to health. Moisture in the Atmosphere is absolutely necessary to respiration. In a dry atmosphere, Cholera, Diarrhoea &c, are induced & yield to Bloodletting.

I now proceed to speak of the effects of Cold. Cold is universally a Sedative. It produces debility from abstraction. Cold is a Negative quality. When excessive heat produces depression, or other Stimuli do, the application of Cold will restore the Body to its Natural healthy State of Excitement. Slowness of pulse in Pleurisy is owing to depression of the System. This state of

Depression is relieved by Bleeding which
unlocks, as it were, the excitement, & the action
is restored. When the System is protr naturally
depressed, it would be improper to bleed,
because the System will not rise. Pain
produced by Cold the System reacts, & a time
for any Rheumatism is produced. The Stimu-
lus of Acute Pain counteracts the effects of
Cold: Cold promotes & increases Appetite. The
Farmers of this State are well acquainted with
the circumstances. They keep their Horses in
warm Stables, otherwise, they would require
double the quantity of food. Cold weakens
the Venereal Appetite, & increases the Secretion
of Urine. It weakens the faculties of the
Mind. The first impressions of Cold on the Skin
produces paleness; this is succeeded by a redness,
which is owing to the impetus of the blood
distending the relaxed vessels. This circum-
stance was supposed to be owing to the Stimu-
lating quality of Cold. To the redness, suc-
ceeds a purple colour, which is owing to a
Stagnation of blood in the vessels; & finally
Mortification takes place. Cold causes a
Bleeding from old sores. It affects the
Nerves with Coldness & torpor. It produces

debility in the Muscles. As Moral evil
is the effect of Moral good, so is Cold the
effect of the Abstraction of Heat. It in-
creases excitability, and debilitates the fac-
ulties of the Mind. It lessens the Force of
the Body. Cold however, Paradoxical it may
appear, always produces disposition to Fevers
&c. Mosley informs us, that if the Heat of
the Air in the Island of Jamaica ever
sinks to seventy two, the most Inflamma-
tory Diseases follow after the Application
of "Heat" Cold is always increased, when applied
suddenly, in its Morbid effects. Cold water
when poured under the Sleeve of a Coat pro-
duces such exquisite Pain, that it has
in some places, been used as a Punishment
for Vice. I knew a young Woman who
could at any time, by having ~~off~~ a Ribband
off her Cape, ~~could~~ excite, or produce a
Febrile. The reason why Holland is so much heat-
ty is, that the Air is so very Moist & Cold. Per-
haps there is more destruction from Cold,
than any other Operation. The Brute Crea-
tion groan under it, and I believe there

does not exist upon the face of the Globe a
greater Enemy to Man than Cold. Dr. J.
Aukham says Most of the Acute Diseases
produced in great Britain is owing to
~~the application~~ an exposure to Cold.

December 22nd 1807 When Cold suddenly suc-
ceeds the short Application of Heat, it is more apt
to produce disease, than when gradually Applied.
It invigorates the System after the heat of a sum-
mer's day, by Abstracting Heat. Some have sup-
posed that Cold is a stimulant, because it pro-
duces redness of the face &c. of persons who are
exposed to it. But this is caused by the reaction
of the System. Cold can only act as a stimulant
by obstructing perspiration, when by the Capil-
lary Vessels become distended, which may have
a stimulating effect. When it produces pain, it acts by
abstracting heat, the parts thereby collapse, and
press upon the Nerves. As Cold Abstracts exite-
ment so it increases (as I said yesterday) sensi-
tibility, or what Darwin would call Sensorial
Power. Cold relieves the System from the effects
of Excessive Heat, but it is not on that Account
a Stimulant. Emetics & Cathartics, as well
as bloodletting increase the Strength, not by

their tonic power, but by their Abstracting
the excess of Stimulus, which produces distem-
perance. Every winter we are robbed of our
immobility to heat, & the action of the Miasmata,
which we had acquired during the summer.
Cold succeeding to a long Application of heat
produces Cholera. When it follows its first
application, Inflammatory Fever is the Con-
sequence. Health & Longevity are more fre-
quent in Cold, than in Warm Climates. The
Inhabitants of Cold countries defend themselves from
the intensity of the Cold by thick walls to their
houses; double glass to their windows, covering
between them the Atmosphere Air; and wearing fur-
drapery. By these precautions the winter is rendered
agreeable and disease prevented. The sick
should always be accommodated to the changes of
the weather — It is from their attention to this
that the Chinese enjoy generally good health.
Transitions from heat to cold, & from cold to
heat, do not necessarily produce disease. It may
be prevented by proper care. It sometimes gives
rise to Obsolete disease in the middle & latter
years, than in the extremes. Cold produces Palsy
& Apoplexy. A Current of Air produces Rheumatism,
Gout, &c. — The abstraction of Stimulus from
one part increases it in another.

More diseases are produced by Cold than by any other Cause. Brutes as I have before said, groan in concert with man under its effects upon Sensation, Health & life. By the opening of the feet & mouth, we receive nine tenths of our diseases.

Sick people have a warning of the changes of the weather & suffer more from them than those in Health. Cold acts upon us more in the sleeping, than in the waking state. Hence the termination of almost all of our diseases are laid during sleep. Old people suffer more from them than those who are young, and drunkards more than sober people. They are always chilly, when not under the influence of Ardent Spirit. Children bear cold better than adults. I heard of a woman who was found frozen to death with her infant was found alive by her side. Heat & Cold act differently at different times. Spring is said to be Youth, Summer Manhood, and Autumn Old Age. The Sackley Season generally commences about the middle of August. This is partly owing to the sleep, and partly owing to Nocturnal exhalations. — " — " —

There are a greater number of Diseases in the Winter, than in the Summer Season or any other Season.

Is Debility the Predisposing Cause of Disease? Hence we find old people, and Drunkards more liable to be acted on by exciting causes. — June is the Healthiest month in the year. Diseases of the Winter find themselves in the month of June. Hippocrates has long ago said "that diseases of the Winter, are not cured until Midsummer". Most of our May diseases bear Bleeding. The stools of patients in Winter till February are black. This proves that they are under the influence of autumnal disease, & that month. Cold is often taken during a Severe cold; hence in Spain it is customary to make a cold in a course voice. Rain checks miliary fever by destroying & preventing miliary exhalation. — Winds have a great effect upon the mind. The South Wind, from its depressing effect, is called Dumb Wind. Wind from the East produces greenish red; hence the Sea-fret of Northumberland. Storms affect health very much, & the absence of Wind produces disease. Baron Humboldt informed me that the Natives on the Head Waters of the Orinoko have no word to express Wind. The difficulties of respiration are High Mountains is ascribed to defect of Oxygen.

Changes affect us more than the extremes
of either heat or cold; Hence a sudden
diminution of the weight of the atmosphere,
is very apt to affect us, as pneumonia, Angi-
na, Catarrh &c. are produced by the sensible
qualities of the Air — Hepatitis is rarely the
effect of its sensible qualities. Winds which
come from the Atlantic predispose to Consump-
tion. I now proceed to speak of various Im-
purifications of the Atmosphere. or

The Insensible Qualities of the Air.

December 23rd 1807. — — — The Sensible quali-
ties of the Air act as Remote causes of Disease.

Their Action is different according as their Action is
Positive or Relative & according as their Application
is long, or short. Of the insensible qualities or im-
purifications of the Atmosphere, there are two kinds.
called by Doctor Miller of New York, Koino-Mias-

mata or marsh exhalations & Idio-Miasmata,
or Human effluvia. Exhalations seldom take
place at a Temperature below 80° Fahrenheit. They
do not arise from marshy grounds, when completely
covered with water. — Once in the Month of
April, all that marshy land between the Del-
aware & Schuylkill (just below Philadelphia) was
overflowed with water. For a long time after
the water was looked for in vain. But the Heat

was insufficient to raise exhalations. Some
years after, a similar event occurred, & I ventured
to predict that no disease would be produced,
the event verified my prediction. Great
of rain, or no rain at all, are not accompan-
ied with Sickness. a Summer perfectly wet, or
perfectly dry, is generally healthy. Moderate
quantities of rain, and a moderate degree
of heat produce Bilious Fevers. The same
Cause will produce different forms in differ-
ent Nations. a Dysentery will reign on
the Summit of a Hill, while Intermittents
Remittents reign on its declivity. The greater
degree of Cold on the Summit, as it were,
driving the disease inward, hence its name
Milvis Introversa. — " —

Miasmata often Co operate with the Possible
quality of the Air. In the Night, under cold
& damp Air, exercise is more fatiguing than
at any other time. Miasmata from vegetable
origin, arise from Cabbage, Potatoes, Mint,
Coffee, Chocolate Shells, Flax, Hemp, Straw,
old Books confined in Closets, Green wood confin-
ed in Cellars, Woods cut down & suffered to
putrefy near Houses &c &c Putrid Animal
matter is productive of Disease, than the

-gitable. On what part of the Body do they
act? I answer, on the Stomach & Bowels, pro-
ducing Inverted fevers, as Colic, Dysentery,
Diarrhoea &c. They also act on the Liver, prostra-
ting the Action, thereby preventing the Secretion
of Bile; or imparting to it great Acrimony.
Supposed Secretion on the Liver, as in Dysentery
hence, in the common use of the Liver, there is
also a discharge of blood & mucus. Unless the Liver
be kept by blood letting - the Bile will be secreted,
& the stools become natural. Miasmata also act
on the Uterus, as on the Brain, Kidneys & Spleen,
producing engorgements in these Viscera. They fre-
quently act on the Spleen with more force than
any other Viscera. They act on the Nervous System,
producing Hysteria, Hypochondriasis &c. On the
Muscles, producing Convulsions. On the Lymphatic
System, producing glandular Swellings. On the
Skin, producing Carbuncles, Petechia &c. These
eruptions prevent fever. They are extraverted fevers.
The plague is prevented by cutaneous eruptions.
When Bile is retained, Yellowness of the Skin ensues,
by the Absence of its excretion, or in other words, by
absorption. Miasmata act on the Eyes, producing
inflammation in Sickness & Autumn. The same Miasmata
to produce different Diseases. It is a specific

to tell by the Eudiometer the impregnations
of the Air, we will now enter into the considera-
tion of

Idio Miasmatic Exhalations - or Humor
Effluvia. However mortifying it may be to
it is no less a fact that our bodies generate Disor-
Idio Miasmata are derived from faults, disorders
Schools, low, vapid, vegetable diet, Depression
of Mind, the crowding of strangers together, want
of Cleanliness, & a scanty supply of good Aliment.
Famine & Pestilence often tread in the footsteps
War. Idio Miasmata is often derived from un-
decomposed putrescible matter, by Stagnation. They are
due to Cloathing. I once knew a Stocking give
Typhus to a servant, several days after it had
been pulled off by his master, who had been af-
fected by that disease. Typhus Mitis, or low
Nervous fever is produced by this cause. In
this the pulse is weak, & seldom requiring blood-
-letting. — Idio as well as Exo Miasmata
produce Buboes, Gonorrh & Influenza. They sometimes
produce Quintary & Scourge. There are two species
of Sanitary; the one from pure matter; the
other from excremental matter. Could universal
cleanliness be introduced, we should be free from
all diseases, depending upon uncleanliness. Holl.

once the Hot-bed of Disease, is now a healthy Country. The United States, by neglecting to drain low grounds, will for years to come continue to generate Bilious Diseases.

December 24th 1807. — At our last Lecture Gentlemen, we spoke of Idio-Miasmata. They are produced by all excretions, which after their discharge become putrid. Of all excretions the perspirable matter is the most apt to produce Disease. These Idio-Miasmata act more frequently in the Winter. They adhere to Woollen & Cotton Cloth- ing. For this reason they should be frequently changed and well aired. Miasmata also adhere to Stone & Brick Walls. They are said to induce Typhus fever only; but they often induce Diseases attended by Symptoms of Inflammatory Action. In Soldiers the Typhus Mition is produced, while the same Cause produces Inflammatory Fever, in the Officers. In Typhus, glandular parts are affected as in plague. There is a great difference between Diseases produced by Idio- & Fovine-Miasmata. In the first place, Diseases, produced by Idio-Miasmata occur in Winter. The term of their Duration is 20, or even 30 days; Lastly, they terminate by perspiration.

Miasmata may lurk a long time in the

the System without producing any effect.

They have been conveyed by the winds to the distance of 9 miles. ~~Heavy~~ rains destroy while light rains, increase putrid Effluvia. High winds raise them when they lurk at the bottom of Stagnant pools. — The existence of miasmata has been called in question. We might as well say the Rose has no odour, because it has never been discovered by experiments made on the Air.

The time of War is fruitful in the production of Disease. The reason is that several Soldiers sleep in the same tents. The French Army march without tents & sleep in the open air. In this case, the fresh Air carries off the miasmata as soon as it is generated, & they are unequal to it. Miasmata, as I said before,

adhere to the walls of Houses; hence the necessity of placing the beds of the Sick in the middle of the Room. Persons sometimes infect themselves again, they may be so vitiated by the insupportable miasmata, as to infect others, & remain well themselves. It has been generally remarked that women in a state of pregnancy commonly escape the influence of miasmata, because they are under a continual stimulation; viz. the stimulus of Distention.

The Ideo Miasmatic exhalations principally affect those persons, who are predisposed by chronic Debility. They produce disease of feeble morbid action. Mr. Bruce mentions a species of Air which proved fatal to Brules. It killed his Grey-hounds & the ules. It probably was, Mephitic gas, which continued near the Surface of the Earth, and therefore did not affect men.

A third Source of Disease is Wholic Gas. The Air of Close Rooms, where there is Company becomes Wholic. Epilepsy generally attacks where there is Company, hence its name "Morbis Comitalis." Carbonic acid gas, which arises from the combustion of Charcoal often produces Disease & sometimes Death. It acts chiefly on the Lungs producing Cough. Manufacturing which emit fumes impregnated with Lead, Arsenic &c. also induce Disease. But these are not all. There are short of Wind, called the Samoan Wind, called also the Harmattan Wind, which often proves fatal. This Wind passes over immorbed of Bitumen, impregnated with Sulphuric Acid. The Vapour discharged from the Earth by Earthquakes produce Disease.

I formerly supposed the Inflammatory State of the Air was owing to its being Super-oxygenated; but Modern Chemists have taught us that the

Air always consists of the same proportion of ingredients. This however disproves the existence of these morbid impregnations. All animals bear testimony to this. We cannot abstract this matter from Air, but we can prevent its noxious effects, by avoiding all exciting causes, if remote causes seldom produce disease without the aid of exciting causes — we now proceed to speak of

Situations

A Country is always more or less healthy, as it is more or less cultivated. A new country is always healthy. When the Country are cut down, if a wet soil is exposed to the action of the Sun, the Heat of Fever is opposed. Intermittents & remittents are strangers in Communities. The reason is that there is such an equal distribution of property, in consequence of which, the whole Country is highly cultivated; all their low, marshy grounds are drained. This should be done in every Country, in order to promote its health. Sapid drinks, & vegetable diet dispose people who live in the Country to Dysentery more than those who live in cities. A Dysentery prevailed in Andover College, while I was a Student there. It was remarkable that none of the Students from Philadelphia had the Disease, all those who had were from distant parts of the Country, & who had been accustomed to vegetable diets.

Mountainous elevations are most healthy, and those mountains on which grow large quantities of ever green, are more healthy than others. There are however, some exceptions to this rule. The British Isles, situated on the hills about Calcutta, are more sickly than those situated in the plains. How is this to be accounted for? Do the hills almost entirely destroy the malarious exhalations?

Wells & ponds are fruitful sources of Intermittents. It is a curious and important fact, that trees growing around these ponds, actually prevent the effect of the exhalations. The air in the place is more healthy than at a little distance from it, either on land or water. The reason probably is that the collection of land & sea air, produces a compound, with which we are totally unacquainted. People who live in cellars are more liable to consumption & Rheumatism. Green wood in houses often produces disease. It contains a saccharine & fermentable matter. The old Romans were well acquainted with this circumstance & they never inhabited a house until a year after it was built.

Close cellars are unhealthy. This may be partly prevented by having chimneys in them, which promote a free circulation of air. The smaller the rooms are in a house, the cooler it is in summer & the warmer in winter. Cleanliness promotes health. Dean Swift was once invited to dine with his friend Sir William Pickington. Upon entering the house, instead of sitting down as he was invited (it is customary) he

first went over every part of the house, from the
Garret to Cellar. On his return to the parlour,
he said "Madam, you are a good House-keeper. I
give you no credit for the cleanliness of your
parlour; for you expected company; but I find
every part of your House equally clean."

(December 26. 1807. -- We will now say a few words
about the influence of Change of Situation.

Those who come from a sickly Country to
City, are liable to be taken with a fever, which
probably, they would have otherwise escaped. This
will happen, and the people of the City, may at the
same time, be healed. They are apt to ascribe it
to the air of the City; But the new impressions to which
they are exposed, are the cause. The habit of as-
king the country people, disease, with new settlements,
new diseases. Grass, plants, which are common
the vicinity of Marsh & Fen, & languish & die
because they are stimulated by habit & become necessary to
their existence. Have thunder & lightning any
influence on the human body, independent of the
changes they produce in the temperature of the
atmosphere? I answer they have. Thunder, produces
Sickness, Cold Sweats, & fainting. I have known it
& epilepsy, produced by Thunder. It is particularly
injurious to some constitutions. I know some persons
who have a kind of Thunder Phobia. (if you will

the word). I shall now speak of the
Influence of the Heavenly Bodies

As we have seen, the contrast between the Moon and the Sun is so great, that we are led to predict future events by the appearance of the Heavenly Bodies. The Sun, Moon, & the planets which we inhabit, have all a very evident influence, but we cannot ascertain that ~~of~~ of the other Planets. I have before mentioned the influence of the Moon, also that in health the power of the Moon is imperceptible; but in disease it is easy to be perceived. I now have a young patient who has a Warworn, but after the full Moon. Its action on the Mercury system is evident. It produces Mania, which from its occurrence only once a month, is called Lunacy. Death most frequently occurs in the Night. This is owing to the absence of light. Epilepsy & Asthma are under its influence. Worms are more troublesome at the full of the Moon, than at any other time. Oysters become fat at the full of the Moon: who then, can doubt of its influence on man? The Moon influences parturition; hence it was formerly invoked during labor (the Goddess Lucina presiding over pregnant women) Chronic diseases are more under its influence than acute: hence we ought advise our patients afflicted with Chronic diseases to turn to rest, & stay in the Evening.

{ The rays of the Sun have also an extensive power.
At the time of the Eclipse of the 16th June 1806, all
the Livestock in our Hospital were perfectly silent.
Not a word was spoken by them. The fowls returned
to roost, & the Cattle to their Shelters. The Thermo-
meter fell suddenly 4° & the Mercury in the Baro-
meter rose $\frac{1}{2}$ inches in the process. Even a Cloud
passing over & obstructing the rays of the Sun effected
a change in the Temperature. These changes may
often do, induce Disease.

The Human body is also affected by ^{the} diurnal
Revolution of the Earth. The Evening, from its
effect on the Body, has been elegantly described
as the Autumn of life; since also, our Chronic Patients
should be always advised to retire to rest early. They
should avoid evening exercise, evening parties, and
study at night. In treating of the influence of
the Heavenly Bodies, you observe that I have given
you facts only. Time will, probably enable us to
form a Theory of its effects.

Of Contagion

The number of Contagious Diseases is very much curtailed. They are divided into those which originate from secreted Matter, & those which originate from excreted Matter. Small Pox originates from Contagion. But there are some facts which would induce us to believe that even Small Pox sometimes depends upon a Malignant Contagion at the time. I have heard of Cases of this kind of Disease in persons who had never been exposed to its Contagion. Hence, it may be established in some instances, an Atmospheric Disease, as well as some others. Some diseases are propagated by Contact, as Plague, Grey Worms, Lues Venerea &c. Others through the Medium of Air. These are communicated by a Volatile Matter, & occur without an exciting Cause. This Contagious Matter differs from Miasmatic exhalations because it is not arrested in its progress by Cold & Heat. We have said that it is taken into the Body by the lungs, Saliva &c. It never acts exclusively on the Skin, when applied. This fact militates against the doctrine of Cutaneous Absorption. Aphacis proceeds to speak of Diseases, as they appear in the form of Epidemics.

Epidemics come on like a disciplined Army: they are not however irresistible. They may be prevented, moderated, may, & are, vanquished by the power of Medicine.

Contagious diseases may be compared to Leontine parties. The influence of excreta Contagious does not extend to more than ten feet. These diseases are more Epidemic. An Epidemic, I include those groups of Disease produced by Febris Miasmatica; as Intermittents, Remittents, the Eastern or American Distemper &c. — Mania is sometimes Epidemic.

Of Laws of Epidemics

1st They are more or less affected in their violence by the sensible qualities of the Atmosphere. Cold & Rain checks them; Moisture spreads them. They are less inflammatory in warm than in cold weather. There are however some exceptions to this rule. 2^{ndly} They are affected in their determinations to different parts of the Body by diet, drinks &c. — 3^{rdly} No two diseases of equal force, & which originate from different causes, can exist in the blood vessels at the same time. A horse cannot trot & gallop at the same time. The symptoms of Disease are sometimes blended. There sometimes seems to be a kind of monarchy among diseases. The Plague Yellow fever &c, have always exacted homage from contemporary diseases of less violence. If they do not entirely banish them, they force them to do homage by wearing their livery.

The yellow Fever has imposed black stools on
Small pox. a fracture of the leg has acted as the ex-
citing cause of yellow fever: It called forth the
latent miasmata into action. An Epidemic im-
poses its influence on chronic diseases. They carry
with them for months the fragments of its Livery.

Epidemics not only demand homage from all
contemporary diseases; but they sometimes chase them
from their presence. In the Year 1764, the Plague
in London banished all other diseases, & would have
no assistance in the dreadful work of Destruction.

4^{thly}. Epidemics of Superior force sometimes
yield to those of inferior force. How can this be
accounted for? Answer, that the violence of Epi-
demies is different in their Commencement, prog-
ress and decline. It is a wonder then, that Small
pox in its beginning should drive away Plague in
its declining state. 5^{thly} Epidemics appear in
a great variety of forms, of different force, and
dissimilar symptoms.

December 2^d 1807th At our last Lecture, Gentlemen,
we considered the laws of Epidemics, which
consideration we will proceed with.

6^{thly}. The same Epidemic is attended with dif-
ferent degrees of force in different Years, and
in different parts of the same Year. It is mild
in its Commencement. presently grows violent.

and in the Conclusion becomes Mild again.
9^{thly} It is different in different parts of the same
Country; and of course, requires different Remedies.
In some bleeding is always fatal. — in others, all who
are not bled die. In some, purging & sudorifics are
fatal; in others, all who are not purged & sweated
die. 8^{thly} Epidemics, produced by the same cause,
appear in different parts of the body, as the stomach, ~~stomach~~
Bowels &c. But the disease is at last an unit. It ap-
pears in different parts of the body according to the
difference of temperament. — 9^{thly} Epidemics often
afflict persons of one Country only. 10^{thly} They often
afflict persons of one age only. By our knowledge of
this Law, we are enabled to account for the great
Mortality which swept off the first born in
Egypt. 11^{thly} Epidemics sometimes affect persons
of one Colour only. 12^{thly} They sometimes attack per-
sons of one sex only. 13^{thly} Again, They affect persons
of one rank in life only. 14^{thly} They attack only
certain communities. 15^{thly} They affect the members
of one family only. 16^{thly} They attack persons of one
profession only. 17^{thly} They affect the Human Species
only. 18^{thly} They sometimes affect persons of all
Countries, Colours, Ages, Habits; Professions & Conditions.

For the most part Epidemic diseases affect the
Human Species only; but they sometimes attack
Brutes, Fish, insects &c. — Mosquitoes never
fail to accompany bilious Fevers.

These flies always retreat during the prevalence
of the Yellow Fever. Epidemics are always preceded
by a season accompanied with, or followed by weather that
is either Hot or Cold, Wet or Dry. - There are either
no monitory signs of epidemics; as the falling of
Birds, Death of Cats &c. They assume various forms,
as Cholera, Smallpox, Leprosy &c. &c. We do not
know what it is that affects the Air so as to form
its morbid constitution which produces Epi-
demics. It may be the Electric fluid. But you
will say that its extent is partial or limited; so are
hairs, Electric fluid &c. why not the Electric fluid?

The pulse is quickened during the prevalence
of an Epidemic. Diseases of much action are
removed by Yellow fever; & hence they people have con-
tinual streaks &c. Langor. Women are more apt
to Miscarry during Epidemics, owing to the action
of Morbid exhalations.

Epidemics are supposed to be sent from Heaven,
as judgements for the wickedness of man. They were also
supposed to depend upon the planetary influence. By
some, they are supposed to have been brought from the
Eastern world; particularly from Egypt & Siam.
Some say, they are imported in Ships, Bales, & clothes
&c. I have heard of fifty Yellow fevers import-
ed in Sailors jackets. But all these notions are
erroneous. Sydenham alone has given us a Cor-

= real knowledge of Epidemics. - Cullen, Darwin & Brown say nothing about them. I shall direct the force of Epidemic Diseases against Popology; and endeavour to chase it at least from the United States.

Of Aliments.

When we injure, by their quantity & quality. Excess in quantity produces apoplexy. Sometimes it lays the foundation of the vicious practice of drinking Ardent Spirits & chewing Tobacco. Disease is produced by too small a quantity of Aliment. The quantity must be regulated by the Age & Occupation. A Labourer, according to some requires 8 lbs a day; But 6 lbs are sufficient. The use of Aliment is to support Animal life by its Stimulating &c. We can eat much more Vegetable than Animal food. The foundation of disease is often laid at Boarding Schools where there is a scanty allowance of wholesome food. Famine accumulates excitability; Causes fever, fetid Breath &c. A small degree of hunger increases Strength apparently. How is this accounted for? Answer, by the Stimulating of (want of food) disease of eating, & loss of life acting on the Accumulated excitability. It is on this principle that people are more devout during a Fast.

December 29th 1807. We proceed, Gentlemen with the consideration of Aliment, and shall

now I, out of the immense & beautiful variety of the world's produce, will consider the quality of the food as a balance in the state of the other. It is a common saying, that the quality of the food is the quality of the man. The Meat of Woman who live upon it. A diet of fresh Meat produces Energy. There is a great difference between the Meat of Wild & Domestic Animals. Indians who feed on the Meat of Wild Animals, are not so strong as white men, but they can run faster & longer; this last arising from habit. The revival of Religion, & the Restoration of Liberty have great influence on Agriculture, & Horticulture, & these influence Health.

A Vegetable diet disposes to Dyspepsia & other diseases of the Stomach. It diminishes the venereal appetite & reduces the size. It is from this cause, that the Chinese are all of slender habit. They are of a sickly appearance, & want that blush of health, which distinguishes those who live on animal diet. This is for the general effects of Diet. — We next proceed to its particular effects on the System.

Many vegetables seem to produce a specific operation on the human body. Beans excite flatulence — Oats produce cutaneous eruptions — hence the Scotch, who live for the most part on this article are particularly subject to diseases of the Skin. Peas, when taken alone produces heart-burn; in conjunction with any other aliment, costiveness &c. The different species of grain require a bad quality from exposure to a moist atmosphere.

It is not so rare in many diseases which show
themselves in the human body. Dr. Hughes treating
on the effects of Air, I would advise you to read
for information on this subject. The different
Modes of preparing food has an influence on its
Wholesomeness. It is unwholesome when long prepared
before eaten. Fish kept several days are apt to
produce disorders of Stomach & Bowels. Eggs when
boiled soft are of easy digestion; when hard the re-
verse, & are apt to produce dyspepsia. Raw fish is apt to pro-
duce dyspepsia. Smoked fish is apt to pro-
duce Diarrhoea. Corn when cooked too much are
injurious, producing Colic, dyspepsia &c &c. Roasting
fatal to numbers. Bread when half baked has
produced many diseases. In one instance I know
it to produce dyspepsia. Long intervals between meals
produce disease. The body then vibrates between two
extremes. — Repetition and debility. Large quantities
of food taken after long fasting, will produce disease.
Valeudinarians often suffer from this, especially
when travelling between stages, they become hungry
& eat them selves.

A diet of vegetables may be considered more
healthy by refraining from labour. A change
from Vegetarian to an Animal diet is further
patients recovering from chronic diseases should
eat five or six meals a day. It is well said
at the small of animal food, when living on
a vegetable diet for some time.

I have known a few Spoonfuls of broth bring
on intoxication after living for some time on ve-
getable diet. Convalescents from Small Pox should
return gradually to Animal diet. A mixture of
Several sorts of food is hurtful, particularly to Con-
valescents; hence we should always advise our
Convalescents to dine on one dish only. Food taken
too hot or too cold, is apt to produce disease. Mr.
Reed, a Member of Congress, died in consequence
of eating an Ice Cream. New dishes are apt to dis-
agree with us. — Thus Cucumbers, Radishes, and
Melons, the first time we eat them, are apt to dis-
order the Stomach & Bowels. It seems as if the Sto-
mach had forgotten its acquaintances; but re-
cognises them after two or three Meals. Aliments
often produce disease from remaining too
long in the Stomach in an undigested State,
hence, when we are called to patients, the ne-
cessity of making enquiry concerning their pre-
vious diet for weeks & even Months before.

Haller mentions a Case where food lay seven
Months in the Stomach. Fat, forty days, so of
a Fish 4 months — a single Cherry two years —
a Grape 7 months!!! Food is often unwholesome
from being cooked in improper vessels. Lead
— or Copper vessels, are the most unfriendly to
Health.

When a whole family is sick, the presumption is that it is owing to something in the Aliment unfriendly to health, or to the Vessel in which it was cooked. When I was at Jersey College, Sixty Students were taken in one night with a diarrhoea from dining on a pie made of pigeons which had fed on poke berries — French Meat is the most wholesome in the winter, Salted, in the summer. Honey sometimes produces dangerous effects. These effects are to be accounted for by Idiosyncrasy. — We are next to speak of

Condiments

These are Salt, Vinegar, Pepper, Mustard, Alspice &c. &c. That salt which is least apt to deliquesce in the Air, is the Best, and least apt to produce disease. The Indians never eat Salt; hence they are more commonly afflicted with Diarrhoea, Vinegar destroys the irritability of the Stomach; produces dyspepsia &c. It was once supposed to be a Specific for reducing corpulence. A Lady in this City being rather corpulent, took to the use of Vinegar. it brought on Dyspepsia, Gastritis &c and finally terminated her existence. — There is nothing that patients deceive themselves in more than in the quantity & quality of their food.

Frederick II.^d of Prussia was a great Glutton; his Physician calling to see him, in a declining state from Dropsy, about eleven O'clock in the evening found him eating a large pye, & when reproved for it, he declared he only eat enough to keep Soul & Body together! It was his custom to dine on a large bowl of Toddy about an hour before dinner, & at bed time, his Calipe. A Greek in this City was affected with obstinate Dyspepsia by tasting frequently through the day Sampers of Sugar & Molasses, which was cured by directing its disuse.

There are two articles which come in for a place between diet & drink & (i.e.) Tea & Coffee. The use of Tea disposes to gout. Women are more subject to this Disease than men; because they drink more Tea. It often appears in the form of Dyspepsia. Coffee, when strong produces vertigo, and a long train of disagreeable symptoms.

Drinks.

There are Water, Wine, Beer, & Ardent Spirits. — Water produces disease in three ways. 1st By its insensible quantities. 2^{ndly} By being mixed with foreign matters, & 3^{rdly} By being taken in too great quantities.

Thirst Cold Water produces disagreeable consequences under certain circumstances. Its first effect is on the L^{iver}: hence more R^{heum} are drawn in Summer than in Winter. The sudden & violent Spasm it produces in the Stomach causes Syncope, & Death. This effect may be prevented by precisely washing the Hands & face in Cold Water, & thus gradually abstracting Excrement. Indians avoid Cold Water. That Water is most wholesome which has been standing in warm Air, or exposed to the Sun for half an hour & in this state it always quenches Thirst sooner. The reason the Indians drink so little, is that they avoid Cold Water, & habit at last enables them to do with but little. It has been found that the contents of Springs come directly from the Earth. Water flowing from beds of limestone becomes calcareous. Drinking so large quantities of it, is very hurtful. Taking draughts of it in the Morning is injurious. This practice originated in intemperance & is kept up by Ignorance. — — —

December 30th 1804. — — — We next proceed with the consideration of Drinking. — — — Wine — This is composed of Must & Ferment Spirit. Gout is the effect of the Use of this Liquor. Its first effect is to accelerate the pulse. In Turkey, where the Use of this Liquor is prohibited by the Law,

The Gout is unknown. Wine should not be used until it grows old. There exists the same difference between old & new wine, as between ripe & unripe Fruit.

Beer, when largely used, produces Gout. I know several instances of this. Cyder also produces this disease. The first fit of Gout that Mr. — ever had, came on after taking a large drink of Cyder. A hot Iron plunged into it obviates its injurious effects by destroying its Acid properties or quality.

Arcane Spirit. — For particular information on this Subject, I refer you to my Inquiries. Had I an hundred tongues, I could not sufficiently describe their evil effects on the human Constitution. I have frequently said that I hoped my pupils would be distinguished by their knowledge of the pulse — I now say, I hope they will be distinguished by their detestation of the Use of Arcane Spirits. If ever you see a son of Oculapine with rosy cheeks, lifting with a trembling hand, the intoxicating draught, discard him. If he says that he attended Lectures here, proclaim to the World, that he is either an Imposter or an Apostate. Not a Student of mine; but a follower of Browne.

Dress. We will consider this under
three heads. 1st Quantity — 2nd Fashion. 3rd
Quality. It has been said that modesty is never
too hot nor too cold. This is strikingly verified in
the fashions of the Day. In a climate like ours
where there are such sudden changes, Season
should not regulate the Dress; It should always
be regulated by the weather. Tight dresses of all
kinds should be avoided. Head - Ach is often
produced by tight Night Caps — Tight garters
produce big knees, an arsearous swelling, & a
disposition to Stumble. These faults of our Females
are brought on by wearing summer clothes too
late in autumn. Woollen clothes are best. Whole
Regiments have been saved by wearing flannel
shirts. I believe flannel would be the best to
wear always. Few diseases are the consequence
of too many clothes; but many arise from too
few clothes. Our Ladies wear sometimes only
one petticoat, & sometimes — none at all!!! —
They go naked and are not ashamed. Eve was
not ashamed because she was innocent. Our
Ladies are not ashamed to go naked; but I
fear, it is not because they are innocent.

Flannel clothing may be worn next to

the Skin for three months together, without
producing vermin, or disease. Next to flane-
nel Cotton is to be worn. Hats & shirts ought
to be made of Cotton — ~~Pander~~ was introduced
into Poland to conceal ^{Pica Polonica} ~~Pica Polonica~~. Large
Pautiers in the neck cloths to hide Scrophula
in the present royal family of Great Britain;
& Boots to conceal Crooked Legs, from Rickets,
in the Reign of Charles I. — " — "

Poisoning

Poison is a violent Force. There is no poi-
son, but which in certain degrees, & by certain Ani-
mals, may be taken without injury. These Actions
is different, as they are applied to different Parts.

When applied to the Skin they are innocent; when
to the Blood they are instantly fatal. All remote
causes are an Unit. They are all Stimulants & their
operation is precisely similar. Poisons are Animal
Vegetable, Mineral, or Aerial. Animal poisons are
the Bites of certain reptiles. Vegetable poisons are
Henbane, Night Shade, Lacrel, Stramonium,
Monkz-Head, Ricin &c — The common Buck

Wheat is never poisonous when eaten as salad, in
its tender green state. The ~~Mineral poisons~~

Mineral poisons, are Arsenic, Lead, Copper &c.

The Aerial poisons are certain gases or the

Carbonic Acid gas, Hydrogen gas (this is a Mis-
take in the Doct. Hydrogen gas is not a poison;
though it is not proper for Respiration, the object
of respiration not being confined to the reception
& emission of a fluid merely. However, I should
not have Animadverted on this, had he not had
once been a Professor of Chemistry in this Uni-
versity, for to pretend to disprove me all his errors
would require the Patience of Job; it would
be a Task equal to that of Hercules when vainly
endeavouring to perform the terrible Command-
ments in Subjection to Eurystheus.) The same
kind &c. — How do they act? Some say that they
act on the Muscular fibre, others on the Vital
Principle. Their action is Specific. On the Muscles
they produce. Walsy, Tetanus &c. Some act pri-
marily on the Blood. Fontana supposes the
Venom of the Viper to act in this way. Some
act on the Skin, as the Poison Brine; & at the same
time on all the System at once, as the Miasmata.
Some act Specifically on the Lungs, as certain
Oriol poisons. How do they produce Death? By
stimulating so powerfully, as to occasion an
inability to perform the Motions of life. The
different parts becoming incapable of trans-
mitting impressions.

WORMS

Worms are found in various parts of the Body. In the Lungs & Urinary Bladder they exist without producing disease for a long time. They are also found in the Trachea & Urinary Lining. In the early winter: but more frequently in the Bowels than in any other part. They are of different kinds, as Lumbrici, Ascarides, Tænia, & Cæcæbiline. They are sometimes generated before Birth. They are sent to consume the Superfluous Aliment in Children. A Worm in the Stomach is an Enterocæci. They seldom affect the Arterial System. We seldom see an idiopathic Worm Fever. In Autumn they produce more diseases than at any other time. I think they exist chiefly for certain wise purposes.

December 31st 1807. I saw many come from a throat & Worms particularly of the Lumbrici. They only produce disease by being in too great number, and by Enterocæci. We should always have an eye to Worms in Chronic Diseases. Diseases & Death have been the consequence of swallowing Churns & Stones, pieces of Copper, Iron &c. Some Substances produce disease by being taken into the Lungs, as Water Melon seed, Crumbs of Bread &c. & if not soon discharged by Coughing they produce death. Pins are sometimes taken in at the Stomach & discharged at different

parts of the Body. I knew a Lady who labour-
ed under a Chronic disease for a long time,
& who recovered upon the discharge of a pur from
the Vagina. Spicula received into the Stomach
will occasion Ulcers, which will not heal
until they are extracted. Small Splinters, &c.
under the Nails Cause Locked Jaw. — One evacua-
tion from the Bowels every day is necessary to health
but some have gone days, & even weeks without one.

I knew a Captain who sailed from this port
(Phila^a) to Lissabon, & returned without an evacua-
tion from his Bowels by Stool! Costiveness occa-
sions Headache by the distended Intestines com-
pressing the Descending Aorta. Piles by compressing
the Hemorrhoidal Veins? and suppression of Urine
by pressing on the Kidneys, and thereby preventing
the Secretion, or by compressing the Neck of the Bladder
& preventing the excretion of Urine. — Sup-
pression of Urine arising from this cause may be
relieved by a purge.

Many diseases are ascribed to obstructed perspiration
& some with Truth, Catarrh, Diarrh. &c. are fre-
quently caused by it. When perspiration is obstructed
the discharge from Lungs is increased. Obstruction
of Bile Causes Costiveness, White Stools &c. Jaundice
is the consequence of a regurgitation of Bile
& maceration, Schirrhus Liver, & Dropsy arising

from the same cause. Are there any Diseases, which arise from a Retention of Semen? No; unless it is accompanied with the Venereal Disease, then it causes Melancholy, Mania &c. — Suppression of the Menstrues causes some Diseases.

Too much exercise or Motion brings on Debility, from ~~Exhaustion~~ Action, and too much rest Debility from Abstraction. It is impossible to enjoy good health without labour of some kind. Women suffer less from sedentary occupations than Men. The old Romans were acquainted with this fact: Hence all their Taylors were Women. Rest disposes to Obesity. Some say that six or eight Hours Sleep are necessary to health; but many enjoy good Health on much less. — Card players will sit up three, four & five nights together; but in such Cases, some Stimulus is necessary. In these Cases, Avarice is the Stimulus; & Life may be supported on it a long time without Sleep. I have heard of Six Weeks.

Undue Exercise of the Faculties of the Mind. — The Understanding & Passions either increase or diminish Action; the influence of the Understanding is great, the undue exercise of it weakens the ~~Human~~ Brain, inducing Fatuity.

It weakens the Stomach and Bowels, inducing Dyspepsia & Chronic Costiveness. It weakens the Senses, especially Seeing & Hearing. It is aided in its pre-

judicial effects by a solitary life. Midnight
Studying are hurtful. The night air is unwholesome.
Disproportion between the age of the Student & the
Nature of his Study Causes disease. We might
as well pretend to qualify a person for eating
beef, by chewing pebbles, as to put a child into
Grammar to qualify him for speaking a Language.
~~Sudden Transitions~~ It is doing violence to the mind
& thereby to the body. Sudden transitions from Idleness
& Study are hurtful. Does want of ~~activity~~ activity
in the understanding have any bad effect? Yes:
Habitual Mental Idleness produces Idiocy.
The less cultivated the mind the more violent
the passions. — Dr. Franklin used to say there
were three ways to pass time. 1st To spend time,
that is, to employ it in some useful occupation. 2nd
To kill time; that is, to employ it to no useful
purpose; & 3rd To let time spend itself, i.e. to let
it pass away without doing any thing at all. The
memory is then weakened in those studies in which,
it is not aided by the Senses.

Morbid influence of the Passions

Passions may be called Acute & Chronic; or
Excituous & Passive, Joy & Fear are examples of
the first; Love & Hatred of the latter. The Stimu-
lating, & Passive act positively; The Sedative

Passions have a negative Operation. They resemble of
Heat & Cold. The latter is nothing but the abstraction
of the former. Grief & Despair are Sedative pas-
sions. Revenge & Stimulant. The effects of
Love is different as it is accompanied with hope
or fear. When unsuccessful it produces Melan-
choly, Mania &c. When a Lady visits a Suitor,
she should - in such a manner as to
preclude all hope. - Joy is a powerful Stimulus
& often produces Syncope & Death. The housekeepers
of Congress fell dead upon hearing the news of
the capture of Cornwallis. Great & unexpected
good news produces Syncope & Death. When Syn-
cope is not produced, Depression of Spirits is the
consequence. I have heard of a young man who
hung himself soon after falling heir to a great
estate; & I know another, who shot himself soon
after taking possession of a charming wife!!!

Rage produces a determination of Blood,
to the Brain, Bleeding at the Nose, an increase
Secretion of Bile, Foaming at the Mouth, Hysteria
Abortions, Mania and Death. Grief produces
Syncope, Asphyxia &c. When long protracted, it
impairs the Memory. It is remarkable that Tears
accompany only slight grief. When excessive
it is attended with Stupor. There seems to be a
weeping point, & above or below it, Tears cannot
flow.

It is moderate exposure grief. Grief reduces
the System to the Sleeping Point. It is common to
see a person sleep soundly the night after some
calamity has befallen him. It changes the coun-
tenance, he drops the Lids, wrinkles the forehead, &
gives the face a brutal natural appearance of
old age. The Arteries of the Heart & even the Ven-
tricles have been ruptured by Grief. The Probed
effects of Fear are quick respiration, a copious
discharge of pale Urine, jaundice, Aphonia,
asphixia, bloody Sweats, Paralysis & Death. Prosta-
-ses of all these effects are recorded, & I have my-
self witnessed many of them. It acts on the Brain
of the Head, causing it to rise, in a peculiar way up-
-wards. Shakespeare mentions this in a beautiful
manner in Hamlet

"I could a tale unfold; whose lightest word
"Would harrow up the Soul; whose every breath
"Blood; make thy two eyes like Starters, start from
"Their Spheres;
"Thy knotty & combined locks to part,
"And each particular hair to stand on end,
"Like quills upon the Fringed Forehead."

It destroys the Memory & Understanding
Annihilates the desire of Life. The Chinese when
closely pursued by the victorious Tartars, threw them-
selves into a River to avoid being cut to Death
by the Sword.

WAR when combined with other passions produces
different effects. It increases the Excitability;
& the Love of Glory acting on this accumulated
Excitability produces exploits in War. There exists
what may be called the joy of fear. When a person
sees himself rescued from danger which threat-
ened him with the loss of Life, he feels the Joy
of Fear.

Envy acts like a perpetual blister, or an
Abscess, according as it is kept at a greater or less
distance from its Object. Ambition is an Inflam-
matory fever in the Mind. Avarice has induced
Mania, & even Death. — The following inscription
was composed by a wag upon an Arch Bishop
(I cannot very well tell for Avarice).

"Here lies his Grace, in cold Clay clad
"Who died in want of what he had"

A perfect knowledge of the Simplicity or
Combination of the Passions is absolutely ne-
cessary to the Physician.

When this propensity is indulged in a lawful way
it is seldom attended with any bad consequences.
When old men indulge to excess, it is very hurtful.
Hence an old man should never marry a young
woman — When his wife is as old as himself he
is not so likely to indulge his venereal appetite.

It is remarkable that the decay of venereal ex-
ercise between 50 & 60 years of age is almost al-
ways accompanied by an increase of venereal ex-
citability. Hence old men prefer young wives.

January 1st 1868 The Editor thus, to day, part
of two of the most distressing letters I ever received, from
persons addicted to Onanism, or self pollution;
one of the writers desiring to be castrated; the other
wishing his exit from this world, such being the
state of their minds. Forrest relates the case of a
young man, who smelt the source at the sight of a
woman. The base practice of Onanism is follow-
ed by nocturnal emissions, sometimes Gonorrhoea, dis-
charge of Semen & Blood, pains in the Loins &c.

Dr. Rush recommends the internal use of
Corns. Acetate of Zinc.

The different States of Society dispose to hor-
rid diseases. The Poor People are the most sub-
ject to Syphilis &c. Governments have considerable
influence in the production of Diseases. Slaves
pass Animal life in a feeble state. The Subjects
of despotic Governments possess more voracity
than sensibility. There is an absence of Stimulus
of the Love of Liberty in them, hence their de-
jected state of mind; hence also; the reason why
negroes are more subject to ~~conulsive~~ diseases.

The Persians are not acquainted with the
disease of Insanity, owing to morbid impressions
being concentrated in their Muscular System.

During our Revolutionary War, the Political
Tory of the English side with some

being preceded by Fear, than it did in this Country. — Lord Chatham died immediately after delivering a Speech to the British Parliament in favour of the American Independence, owing to the Stimulus of Joy, acting with accumulated force upon the excitability, which had been increased by Fear. Here the Action was sudden.

Errors oppose errors, but Truth agrees with Truth; Hence the good health of the Republican Party, during the Revolution & the disease among the Tories, called very hot; this prevailed for the most part, in South Carolina. The Republicans on the contrary, were uncommonly healthy; Hence the Republican form of Government contributes to health.

Religion

I next proceed to consider the healthy influence of Religion. It is a happy to health, relating to Respiration. Religion cannot fail of influencing the body through the medium of the Mind; & a sense of its exalted power. A Whoremonger who renounces Christianity, ought also to renounce his profession; so essential is it to the Profession. — — I shall now speak of the Diseases of persons of different Occupations. The first occupation of our forefathers, was Agriculture. Farmers, Carpenters &c. who labour in the open Air, are subject to accidents, fevers &c. but are generally longer lived than any other class of people. The Diseases of many labourers are numerous, Dropsy, Ulcers &c. &c.

Measles have pale faces, weak, & are subject to Dys-
pepsia & Hypochondriac, from their sedentary em-
ployments & from their being for the most part, em-
ployed under ground. Watch & Clock makers, Taylors
& Shoemakers are subject to diseases from their em-
ployments, as Costiveness &c. The Glutei Muscles of Shoe
makers, & Gastrocnemii & Sartorii Muscles of Taylors
are most commonly in action, & are larger than
those of any other Person. Smiths are subject to
Inflammatory diseases arising to the Metals which they
make use of. Painters are subject to Cancers, Com-
plaints, from being most commonly employed in gar-
rets or upper Stories of the House, they detain their U-
rine for a considerable time. Doct. Franklin, when
he followed the Business of Printing used to lay the
font upon the Stone to warm the Types in winter) he
found his fingers become numb & stiff; he could not
account for it for some time, at last he attributed it
to the heat of the Stone, volatilizing the particles of Lead,
& when desisted from heating the Types the disease left
him. — Lawyers & Physicians are generally long lived
because their blind exercise with Study. Physicians
who ride much are subject to Costiveness, Piles,
Fistula in Ano &c. Soldiers & Sailors are most
subject to Scurvy.

(4th. usements) — Diseases are sometimes —

Brought on by Amusement; hence the fatigue of
a dance reduces the System below the Sleeping point.
But you will not see a Farmer, returning from his
harvest field who will not Sleep. Diseases sometimes
are owing to the Idea masmota arising from Squeezing
at parties & hence the number of Catarrhs about
Christmas. The Theatre not only produces the same
diseases as parties; but also Nervous Diseases. Tragedies
excite virtuous Sympathies; but not virtuous Actions.
Tragic Scenes, produce retrograde Action of Sympa-
-thy in the audience. We see persons apparently in
the greatest distress, & sit still without lifting a hand
to relieve them; our passions recoil & nervous Diseases
are the consequence. One ignorant Highland Soldier
went to the London Theatre one evening, when
the Tragedy of Macbeth was acting, & hearing Macbeth
cry out "Is there no help at hand?" instantly drew
his Sword & leaped upon the Stage. Crying out, "Help
at hand my Liege; not being able to restrain his
feelings. Hunting has brought on the most formidable
diseases of the Inflammatory kind. Morning Drums
are used (tho' improperly) in some parts of England
on account of the Fog (as they suppose) depriving the
System of spirit; then drawing they call Antilogonatic.

Another cause of disease to Ladies, is receiving
Lying in visits. The ringing of Bells is injurious
to Hysterical patients. Tobacco in its different forms

is the Cause of many diseases.

Hereditary Diseases — There are Congenital & Hereditary — Congenital are Venereal, Small Pox, Measles, Yellow Fever &c. Consumption is generally derived from the Father, & Mania, ~~Insanity~~ from the Mother. Hereditary diseases are Dropsy, Cancer, & Sore legs. I knew a family in Chester County, in whom Sore legs were hereditary, only appearing in the decline of life. Congenital Diseases are acquired in the womb. I have known Children to be afflicted with family diseases when the Parents were entirely free from them. Those that attempt to prove that Consumption is Contagious, prove too much; & therefore prove nothing at all. I have known Leprosy disappear every 2nd or 3rd Year & reappear every fourth; hence the propriety of the Physicians enquiring into the Hereditary diseases of a family.

January 2nd 1803. I proceed, Gentlemen with the
consideration of the remote, predisposing and
Exciting causes of Disease

The Injury that has been done to Mankind
by false Theories in Medicine, is incalculable. The
Aminæ Medicæ of Stahl, Morbid-Viscosity of
Boerhaave, the Spasm of Hagström, the Criz Me-
-diatrix-Natura of Cullen, the Lability of
Brown, all have done much Mischief.

Streams of Blood have been spilt in demanding
to correct the medicæ of Boerhaave. Opium
is daily committing murder in the hands of the disciples
of Cullen & Brown. I perceive by the manner that the
predisposing cause is the disease itself. They give Opium,
in the first of it as they regard to the cause.

There is such a truth in medicine. Every
theory, however erroneous, contains some truth. This
theory alone which collects facts under facts. An
injudicious confidence in the Salutary operation of
Nature, forming a part of all Systems. It would be
improper to speak against this to our Patients, & even
to some Physicians. It is still the Pygolia of Medi-
cine. — I have some where seen a dispute between
a Troop & a gun. Stagkai; each of which claimed
a preeminence over the other in destroying the
lives of men. — Could a quack have been

introduce as a third disputant, he would quickly have
convinced them both that they must yield the palm
to him in the work of Death!

In many diseases the great Medicines used, are
taken without advice. They do harm by inducing
Costiveness, &c. purging Salts, often produce Colic and
Diarrhoea. The habitual use of Aloes brings on
Piles. The continued use of the Butter nut, induces
Vertigo, Palsy &c. The French use this article. In
France in Burgundy & a Chapter embrace the whole of
the Materia Medica. The habitual use of Butter
does much harm. They destroy the Irritability of
the stomach, and induce Drunken drinking. The
use of Nitre increases Dyspepsia & Colic. The im-
prudent use of the Cold Bath has induced instant
Death. Pediluvium should always be prohibited
in diseases of high Morbid Action; Patients are
very apt to make use of it without advice. We
should always be careful to forbid it in cases where
we think it would be improper.

Hot drinks are very common in Spring - Abstinence
from Animal Food is better. - Even we should always
be forbidden in the beginning of Fevers. Quack
Medicines have contributed largely to the work of de-
struction. Gougeon's cordial has to my knowledge
killed a child. James's Powder & Turbington

= Balsam have also done no little mischief. Some of these Patent Medicines do neither good nor harm, & there by increase disease. Dr. Priestly had nearly killed himself by taking James's Powder; thereby suffering the Pleurisy to gain considerable ground.

Medicine also does harm in the hands of Physicians. I have known Laudanum to produce violent Colic; & Bleeding to produce debility with serious consequences. Mercury has killed, when given to produce Salivation.

We will next speak of

Sympathy and Antipathy, in producing disease. The Sympathy of Mind has long been understood; but that of the Body has been but little attended to. Many facts unite to prove that this Sympathy does exist. Yawning will go through a whole company. Boerhaave relates a case of Convulsion by Sympathy. What in the Western States is called the Jerks, or Jerking exercise, was probably first induced by Oratory, or perhaps by Divine Power; but it is evidently propagated by Sympathy. Man is justly styled an imitative Animal. His Muscles often move without the consent of the Will. I have heard of a Child who took up its food with its mouth instead of its hands; & snapped at flies to drive them away, instead of using its hands. This the Child learned from a Dog with which it was accustomed to play before the Fire. Its parents being

poor, were not able to hire a Nurse; & had nothing to attend to it themselves.

Diseases from Antipathy, are Congenital & Acquired. James II was born with an Antipathy to a Drawn Sword! Peter the Great of Russia was born with an Antipathy to a stream of water; and the only way he had to cross a River, was to throw himself. He had long into the Boat. Some persons cannot stay in the Room with a Cat. This arises from Association & from the Inspiration of the Cat. Innate, or Congenital Antipathy is Acquired during our residence in Utero.

The Influence of Ideas & Motions in producing disease is considerable. They Act by Association, & independently of Association - The recurrence of all Periodical Diseases is owing to Associated Motions, or Ideas. I have known the Paroxysm of an Intermittent kept off several hours by confining the Patients to a dark Chamber.

Effects of Accidents

Many Diseases are produced by Falls, Scalds, Cruises &c. I have known a Hydrocephalus interius come on a Month after the Contusion of the Head. A Stroke on the Back has produced an Abscess four Years, after it was given. We should never consider a Contusion of no consequence, but should obviate its effects by Bleeding;

low diet, purging, &c. We will now speak of the
Influence of Time.

It is of the utmost importance that we should
always live on good terms with our Stomach, for
Sooner or later it will revenge all its injuries. I
have called it the Conscience of the Body. Mis-
governance retards the progress of time upon Age.

It always adds several years to life. Even those
who live in the Eastern, will live longer by
emigrating to the Western States. Not more than
Seven or Eight in One Hundred die without disease.
They are like an old violin, fairly worn out, and
the strings unable to emit sound. — + — +

Infancy is disposed to many diseases 1st from
the disproportionate size of the head, there is a
great determination of blood to that part. 2nd
From the cartilaginous state of the Cranium,
& opening of the Fontanelles. 3rd Children have more
irritability than Sensibility; hence they are most
liable to convulsive diseases. 4th From the great
irritability of their Stomachs & Bowels, they are
disposed to Cholera Infantum &c. Cholera is
nothing but the Bilious humor invited to the
Bowels by their Irritability. 5th From the
great activity of passion, & lastly, from
Worms. As Infancy changes to Childhood the

determination goes off from the head to the Trunk of
= Chea; hence Cyanotic Tracheitis is more fre-
quent in childhood than at any other period.

June 4th 1865

Of Predispositions

to Diseases at Puberty

At this age there is a determination of blood to genital organs, the are
now subject to inflammation, fever, pains in the joints,
called gonorrhea, gonitis &c. Females are more subject
to diseases of from vitiated appetite than males. --
Between the 18th and 30th years there is a disposition to Con-
sumption. Plethora is produced by the quantity of blood
being disproportioned to the size of the body. This Ple-
thora is thrown upon the lungs; hence the disposition
to Consumption. Different diseases are produced, as
scarcely as there is Arterial or Venous Plethora. Fewer
people die between the age of 40 & 57 years, than during
any other 17 years of life. In this age, there is an exact
equilibrium between excitement & excitability. People
of this age are generally more happy than at any other
time. But it is in this tranquil period that death
from old age begins his operations. The gradual decay
of the Eye sight is the first Symptom. When a man
first puts on Spectacles, he puts on part of his shroud.
After this follows an inability to retain the urine for
any length of time. When a man first rises from
his bed in the night to discharge his urine, he makes
first step towards the Grave! Between the years 70
80, and 90, the whole excitability of the system seems

to be absorbed by the Arteries; hence the Flaccid, but full, round pulse, at that age. The fluids become acrid by age. The Smell of the Urine becomes intolerably offensive. The tears possess a peculiar acrimony, & the most trifling sores frequently terminate in Cancors. Age is marked by progressive debility. It appears in a disposition to be angry. This arises from great nervous sensibility. It appears in the Organs of Speech, in a tremulous voice — in the Muscles, by the Shaking of the Head — in the Brain by Vertigo in the Intestines, by Coughs, by Costiveness. in the Nervous and Arterial System by Palpitation. —

Before the Single man or woman are disposed to many Diseases. In those years which Males & Females spend in a state of Solitude, when they should be in the Married State, they are liable to many Diseases. More single Men & Women die ~~than~~ at early periods than Married People. A Bachelor's life is a good Breakfast, a tolerable Dinner, but a very bad Supper. Men soon after Marriage, become disposed to disease. Marriage in Women disposes to Disease, chiefly by the mortification of feelings which attends it. The desire of "Progeny" Universal. Judge then what must be the effect of disappointment in this on delicate habits. Pregnant Women never die of Consumption. Consumption is subdued by the patient becoming pregnant. Pregnancy disposes to diseases by want of exercise; to Vertigo from Plethora — to Costiveness from pressure on the rectum.

Sucking disposes to Consumption. Suddenly taking a Child from the Breast, when there is a plentiful Secretion of Milk is hurtful. Women, at the period when the Menses disappear are liable to many diseases. When they become irregular, they are about ceasing. During all this period, Women are subject to diseases from the narrowness of the Thorax, as Hemorrhages &c. Deformity is the complete consequence of Disease. Preternatural height, & unnatural lowness, predispose to disease. Obesity disposes to rest too much rest — hence to disease. A large Head and short stock disposes to Apoplexy. — a narrow Chest, leads to Consumption. Women suffer less from Deformity than men.

Congenital weakness disposes to disease. Seven Month Children bring it into the world with them. The present King of Great Britain was a Seven Month Child. I have now finished the Consideration of the Remote, Predisposing, & exciting & Proximate Causes of Disease. I have divided the Causes in this manner in compliance to the custom of Medical Authors; But we might include all except the Proximate, under one head, viz. Remote Cause.

There is but one Predisposing, one Remote, one exciting, & one Proximate Cause. I again tell you, Gentlemen, there is but one disease, which is Morbid Excitement. I shall pursue this Morbid Excitement into all its holes, & scout it out from the human body.

Almost all impressions which produce disease,
appear in the Stomach, Liver, or Bowels. I now
propose to enquire into the

Causes & Phenomena of Death

The Causes of Death I shall extract from
my Lectures on Animal Life. The Abolition of all
these Stimuli must support life. Prior natural rigidity.
Wounds producing a solution of continuity. Stimulation.
Stimuli losing all their efforts by long use. Just be-
fore Death there sometimes takes place a concentration
of dormant knowledge — Elevation of Spirits, above
the ordinary exertion of it & a discovery to new talents.
These are owing to a translation of Morbid Excitement;
the excitement (just before Death) also sometimes con-
centrates itself in the Trachea, hence the loud
voice which sometimes ^{precedes} Death, even utter Aphonia.
It is sometimes concentrated in the Bowels; hence
the Diarrhoea which precedes Death. Sometimes in
the Muscles; hence Convulsion & Spasms. Sometimes just
before Death sometimes rise out of the Bed. Again
Morbid Excitement is sometimes concentrated in
the Stomach, — hence exquisite Sensibility. In the
Uterus, — hence the Active Pulse, & sometimes just
before death. It is sometimes concentrated in the
Lymphatics — hence the Absorption of Water in a part
just before death. In the Skin; hence intense Heat
and Eruptions. In the Penis — hence Priapism.

Mould Experiment passing from one part of the Body to another is generally attended with pain; but this is not always the case, as I shall say hereafter, Dr. Priestley & William Hunter, both expressed pleasure, in passing to death, - Hence this translation of excitement sometimes affords pleasure. Again, it is even stationary at the point of pleasure - Hence dying people frequently express their pleasure, by Smiles, & other tokens of joy. It is also, sometimes, stationary at the point of pain. Again they sometimes feel neither pleasure nor pain. Death from Old Age is never painful. (Respiration) in dying persons, frequently becomes altogether involuntary. The exertions also frequently become involuntary. The Pupils of the eye generally, just before death, become very much dilated.

Death is sometimes accompanied with a dread of futurity & sometimes is accompanied with a good deal of Fortitude. Heat & Colour often fluctuate for some days but I never saw a case of Resuscitation.

Much has been said about the Ultima Movens. But it is evident that it is different ^{at} times. That part, to which experiment retreats, is the last impaired. If the Brain is not injured, the Mind lives longest. People often exercise their thinking faculty until the phenomena of life cease. The Bowels are sometimes the last that die. Hence Stools are sometimes discharged after Death.

The excitement sometimes flies from Post to Post, till after making a vigorous resistance, it is obliged at last to yield.

Thus Gentlemen, we have finished our Pathology — Our view of the Human Body has been gloomy. We will now pass to a more pleasing prospect, & descend into the measures ⁽¹⁾ to remove those evils.

Praxis Pathologi

Therapeutics

Sunday, January 5th 1818.

Continued

We come now to apply the principles hitherto delivered, to the practice of Medicine. I will not say that my principles are true; but they are necessary in order to lead to Truth. There is such a thing as truth in Medicine. It must be approached by a staircase, and this staircase is composed of steps, or principles.

Medicine has been progressively improving ever since it became a science, because it has received support from other sciences. It is one of the greatest blessings ever vouchsafed by Heaven to the children of men. I shall not in this part of my course, pretend to mention the doses of all the Materia Medica; for this I refer you to the Professor of that science. I shall merely mention the different classes of Medicines & enquire into their mode of operation.

An enquiry into ~~the~~ Nature comes first in order in our Therapeutics. Physicians have been called the Servants of Nature (but I hope

that now she will deserve that name) and it has been said that it is their duty to watch her operations. Here Dr. Rush read part of his oration to the Philosophical Society.

By Nature, I mean physical necessity. In fever Nature creates a desire for cold air, cold water, and deprives us of our Appetite. But her operations are often over proportioned to the cause. She does much mischief in many cases. She wastes herself in unnecessary force in dropsy. She drives the melancholy patient into solitude, instead of driving him into company, & thereby does much harm. It has been said that she warns us of our danger by pain. But there are diseases in which she refuses us this harbinger. In Consumption, she alarms us by very little pain, when the danger is great. Again the pain is sometimes greater than the danger, as in Paronychia. Odontalgia &c.

In Hemorrhages Nature produces a disposition to Syncope, & thereby occasions a Coagulation of Blood. In Ulcers she throws out a quantity of Matter; but in Apoplexy, she destroys the patient, by pouring the blood into the Brain when it might be discharged through the Nose.

I am not the only Person who opposes the healing
Wonders of Nature. Sydenham long ago said she was
not to be trusted to, and Dr. Mosley said he had no
Opinion of Nature as a Medical despot; or of Ob-
-servant Physicians as her Ministers. In truth
there are none who rely on the Salutary effort of Nature.
How where is the Affinity of Blood letting & the tenden-
cies of Nature? & where the Physician who does not
blush every day. In all violent diseases Nature
is like a drunken man in a dark Room. He can-
not find the door or window. If he happens to come
to the door he tumbles against it, breaks it, and
his own neck likewise. The ineffectual & the pre-ju-
-dicial efforts of Nature may be observed in the dis-
-eases of Domestic Animals. Bilious & other forms
of disease which affect the Human System, so as
to be easily cured by appropriate remedying, will be
almost uniformly fatal to Domestic Animals,
in whom they are trusted to the operations of Nature
alone. In such cases, we should use her like
a Noisy Cat, i.e. turn her out & shut the door.

The proper treatment of New Epidemics
may be discovered from an observation of their
effects upon the Constitution of those who are
attacked but slightly — If an Epidemic at-
tacks a City, we are to observe its effects upon
the inhabitants of its Vicinity. & then are effect-

ed with Symptoms of an Accumulation of
Bile &c. we should treat the Disease in
the City with Emetics & Purgers &c. If an
Epidemic attacks the lower order of Soci-
ety, we should attend to its effects in those
of the higher order, & treat the Epidemic ac-
cordingly. Are there any diseases which it
would be improper to cure by Art? I answer
there are. Eruptions on the head should not be
removed without substituting a Diarrhoea. The bleed-
ing piles in old people should not be removed. -
nor in young people without exciting some vicu-
ous discharge. Gout in the limbs should be checked
-ed. Some cases of Rheumatism should not be re-
lieved. Dr. Mour's Daughter was seized with Mania
in consequence of being cured of Rheumatism,
which, again returning, removed her Mania.
Blisters should be approached with a trembling hand.
The Cough of old people should not be cured.
Chronic Sore should not be healed. Ascites, when of
long standing should not be relieved by tapping, the
Stimulus of Distension by Water seeming to have
become necessary to life. In some cases the
pain itself seems to be a necessary Stimulus.

The Diseases of Cold & Warm climates

require different treatment; & a variable Climate different from both. The Season of the Year should always be regarded. The relative force of Diseases should be attended to. Various Circumstances are to be attended to. They influence Disease. Even the Moral & Intellectual Habits should not be neglected by an American Physician. An Englishman will not recover until he is indulged in the food of his Native Country, i. e., Beer & Cheese. A Frenchman will require Soups, & Wines. An Irishman, Potatoes, & sometimes a little Whiskey. In individual Predispositions should never be neglected. — One Man's food, is poison to another, & what would cure one Man would kill another. —

Hygiene should be ~~thoroughly~~ enquired into, when you prescribe for a patient, you should enquire whether he has a desire for any particular purge, or not do. — In all Chronic Diseases we should enquire into the Diseases of the Patients Ancestors. The Age must be always known. In female patients the Catamenia should be enquired into. In men the State of the Hemorrhoidal vessels, & in Children we must not forget Worms. — The effects of the excess of Venery in Youth often appears in extreme old age.

Intemperance in Eating & Drinking, Love, Pride, Guilt, Devotion, Mortification &c. produce

Mania. we should attach them to the combined powers of Reason, Religion & medicine. You must recollect that the removal of the remote Cause does not always remove the disease. Celsus is very wrong when he says "Sublata Causa, tollitur effectus".

Some diseases have been cured by gratifying the longing of our patients. But this is not always safe for if a person labouring under an inflammatory fever was to long for a piece of Beef Steak, it would be dangerous to indulge him. —

January 6th 1808. — we resume our preliminary remarks. — There is a far more active principle in the Mind than Hope. It is one of the component parts of the Human Mind. This is Haste. By inspiring this it was that Christ, performed such Miraculous Cures. A prudent Physician cannot fail inspiring it when it can be done consistently with truth. —

Different modes of preparing Medicines cause a difference in their duration; as the different modes of preparing food &c. &c. it more or less digestible. Opium will often agree with the Stomach when Laudanum will not. — Great Advantage will be derived from

diverting our Patients from self attention, as it
is termed, i.e. from thinking or talking about
their disease. Mirth is hurtful in an Inflam-
matory fever, as also Opium & other Stimulating Re-
-medies. Much conversation should not be allow-
ed in ~~the~~ ^{these} cases. In chronic cases it would be ser-
viceable. When we cannot cure a disease, it should be
our care to ease pain, to shorten the passage out of life.

Our practice will ever be uncertain, while visit-
ing Physicians have so much influence over our patients.
The Physician should have uncontrollable power. Too
many visitors should not be admitted. It
observed that the majority of his Patients that died, fell
victim to their diseases on Sundays, or a day or two
after. In cases of Hoax, days they received more vi-
siting. We should not however, exclude strong and
sensible young men; as I have known many cures
performed by their visits & prayers. I have known
some good done by advising Patients to make their will.
But a Physician should never advise this, he might
as well sit in judgment on the Patient, & pronounce
sentence of death.

Diseases are taken in three ways. First, by force,
Secondly, by regular Feign, & grip. By stopping all the
Avenues to it. Diseases are cured in the same
way. I will now say a few words on
Choice of Medicines. Medicines were

formerly valued in proportion to their price; or
by the horror which they excited. Disgusting Meds.
such as Human Pully, Blood, &c. were once famous
Medicines. Three fourths of the Materia Medica are
composed of inert articles. A few remedies will be
sufficient. The only difficulty consists in attaining
a proper knowledge of the time when they should
be given. There is as great a difference between
the physician who prescribes for the name of a dis-
ease & one who prescribes for the state of the System
as there is between the Chinese Characters and the
Roman Alphabet. The Chinese have a Specific
Character for every word; whereas the Romans by
varying the Alphabet form every word in their
Language. Medicines generally act more pow-
erfully when several are combined. Thus Bark &
Valerian have cured disease, when combined, after
each separately had failed.

It is a common observation that should always be observed in
writing Prescriptions. The Prescription should be written in
a plain legible hand and on clean paper & the Name
of the Patient never omitted. If these are observed they
will never fail to inspire respect towards the
Physician. Bad Spelling will excite the disgust of
the Patient & a want of Confidence in the Prescrip-

tion, both of which are unfavourable to Recovery.
Let us next inquire into the effect of

Compound Councils or Consultations

A Physician should always request Consultation;
1st In all doubtful cases. 2nd In all dangerous
cases. 3rd In all tedious cases, and 4th In all
desperate cases. But heterogeneous Consultations, i.e. =
between Physicians of opposite theories, are injurious. Sub
stantially converts the Sick Room into a Plough
-the House. If it was judged incongruous, by the
Jewish Law, to yoke an Ox & an Ass together in the
same Plough, how much more so is it to call in
two Physicians whose Theories are more different
from each other, than an Ox is from an Ass?

{ H... the 1st introduced a history of the abuse which had been co-
laboured, based upon him his kindness at this City Philad^a & others
(I suppose he meant Peter Visconti of Infamous Memory) in the year 1793
it was on account of his treatment of those Physicians who did the 2^d sound
thing he killed the world that he was a Madman & a Murderer & ought
to be hanged for the sake of his Country &c.

With these preliminary remarks I proceed to speak
of the different Cases of Recovery: but will first beg leave
to recapitulate all those morbid states of the System in
which they are employed. 1st Preternatural or elevated
excitement. 2nd Debility. 3rd Depression. 4th Fever.
5th Oppression; hence the System is reduced below the
reaching point. 6th Prostration. In this state the Ecce-
-sivity is in Sante Abundant: & 7th Quiescence. They may
occur with or without disease. It will also take place

between the effects of impressions. — Each of them I have divided into several grades. —

1st Preternatural or Elevated Exaltation precedes Dis-
-ease. It is accompanied with preternatural appetite,
great Cheerfulness &c. — The French call it "en bon
point," — but improperly; for there is a great tendency to
disease. 2nd Debility. The remedies here are Rest, —
Gentle Stimulants &c. — We must be careful to distinguish
between the Species, or grades of Debility, for Aspa-
trix Stimulates the Nerves, without affecting the other
Parts. — On the other hand Opium Stimulates the Mus-
-cular System without having any perceptible Opera-
-tion on the Nerves. 3rd In depressions gentle eva-
-cuations, or Stimulants must be employed according to the
grade. 4th Disease. — Here the remedies are either Sed-
-ative or Stimulant; — i.e. Medicines which either ab-
-stract excitement or increase it. They diffuse & equalize
it: & where excitement is local. They render it Univer-
-sal.

January 7th 1818. Debility. The first
effect of impressions is to Elevate Exaltation. If these
impressions are continued, Debility is the consequence.
Disorder may be produced at several points. — If the
application of these impressions is still continued,
Debility is succeeded by disease. But Debility may
exist without disease or ~~disease~~ or Disorder. The
System may be predisposed to both, & yet neither be

Take no food for several days before they are killed are left liable to putrefaction. ... Larkspur is a Sedative. It acts by abstracting the Stimulus of light. Science is also a Sedative, abstracts the Stimulus of Sound. Hence its utility in diseases of the Brain. Experiment should be abstracted gradually. Nature revolts at sudden abstraction. Natura nihil fit in Saltum. i.e. Nature does nothing by a leap & jump!

1st I believe in Specific Stimuli; Larkspur. 2nd I believe that Medicines act on some parts of the body through the means of others. 3rd In this I believe convey that they act on the every part of the body. 4th I believe that some Medicines enter the circulation. 5th I believe that Medicines act on the Sensibility & Irritability. Camphor acts on the Sensibility, & Digitalis on the Irritability. 6th Medicines sometimes act on one System more than one. 7th Other Medicines act upon several Systems, & some act on all of them. Some persons have undertaken to say, that I proposed to divide the Articles of the Natura Medica into Classes according as they act upon different Systems. But I never proposed this division. I desire any person to prove it by any part of my Lectures, or any of my Publications.

Class Articles.— These I shall divide into three Classes. 1st Lenient. As Castor oil &c. 2nd Active

Such as Jalap & Calomel. 3rd Drastica, such as
Aloes, & Gamboge. These last are only to be used in
particular Cases. — They are indicated, first, when the
bowels are over-distended with Feces. 2nd In almost
all diseases of the Head, Breast, Wind-pipe &c. 3rd In
all Cases where the bowels are unable to perform their
functions. 4th In all diseases of the same kind in Constitu-
tions & Viscera. 5th In too much excitement of the
capillary vessels. In this Case, they reduce the pores sub-
to the Solvent & Evacuating Principle. 6th In Pregnancy & Parturi-
tion. 7th In Dropsy. — here the Liniment, or Drastica
Purgers are to be given according to Circumstances.
8th In Obstruction of the Hemorrhoidal Vessels.
Dr. Hamilton has lately recommended purgers in Typhus.
But there are some Cases of Typhus, in which
purgers would be very improper & even dangerous. I
have known a Spontaneous Stool to produce sud-
den Death in a low Typhus. — The following Rules
should be observed. 1st Cathartics always operate in
life doses when the patient has been previously purged
with the same Article. 2nd They may act as
Antispasmodics. — When this effect is produced, the Diarrhoea
should be kept up a long time. Spontaneous diarrhoea has cured Mania. We should
take this hint, & try the effect of an Artificial
Diarrhoea in this disease. 3rd When it is Febrile

= Capary to use Cathartics for a considerable
length of time they should be changed. 4th Drinks
given to assist Cathartics, weaken their operation
by dilution. 5th Laxative purges induce Sweat
Sooner than Drastics. Cathartics are forbidden
1st in all diseases of Weak Nervous Action, as in Suppur-
gls, in Hemorrhages from the Bowels. Patients in this
should not rise from the Bed. They are forbidden in the
first 4th of Colica Petronum.

Emetics, may be divided into three Classes. viz.
1st Such as act promptly, among these may be reckoned Tick-
ling the Throat with a feather. I have often excited
vomiting in this way after emetics had failed, and
thereby have saved several Lives. 2nd Laxative Emetics,
those which act pretty certainly, but slowly. & 3rd Active
Emetics, as Antimony Tartari. 1st They are indicated in
Cases where Opium has been taken to produce death.
2nd In a languid condition of the Stomach, to prepare
it for the exhibition of Tonics. 3rd In diseases of the
head of moderate violence. 4th To discharge Mucus
or bile from the Stomach. 5th In Tumors in parts
remote from the Stomach. John Hunter says that
Emetics are very serviceable in discharging Buboes.
6th In recent dropsical effusions. 7th In op-
pression of the Lungs, Cynanche Trachealis, Catarrh
&c. 8th In a dryness & torpor of the Skin, they reduce

its pores to the Sweating point. They are more safely & effectually given to children, than to adults. In children there is no risk of Hemorrhages or Ruptures. The following Rules are cautious are necessary to be observed. 1st They should be given in divided doses. 2nd No drink should be given when a speedy action is required. 3rd The Patient should resume a recumbent Position during their operation. Pruritus will thereby be prevented. Emetics are Contra-Indicated in highly Inflamatory fever. — In advanced pregnancy. — In persons subject to Hemorrhages & Ruptures — In Congestion of the Brain — In Chronic States of Fever. — When they operate too freely a little Laudanum will check them.

Diaphoretics consist of those which act directly on the Skin, as Pedicuvium, Cold Air & Water, applied to the Body, when the System is in a high State of Excitement; thus by diminishing the action of the Capillary vessels. These I shall call external Diaphoretics. — And of those which act on the Skin through the Medium of the Stomach; Internal Diaphoretics. Their action in this way may be explained upon the principle of continued Sympathy. — Are the Capillaries ever excited beyond the Sweating point? Yes: and Sweating is to be produced by abstraction. Diaphoretics are either direct or inverse. Diaphoretics are indicated in Cases where any Matter is floating in the blood as Miasmata. The Indians expell poisons from the Blood by Diaphoretics.

I have heard of a young man who had Lues Venerea several times and was always cured by a spontaneous diaphoresis. They are proper in Cases of Gout, Rheumatism, in which blood letting is improper. These are Centrifugal Diseases. — In all Diseases of the Bowels, as Dysentery, Diarrhoea &c. — In all Diseases in which there appears a disposition to Diaphoresis. In great heat of the Surface of the Body, & when the Body is dry, In this Case, Cool Air, Water &c. will readily excite Diaphoresis by decreasing the action — In the exhibition of these Remedies the following rules should be attended to. — 1st To promote perspiration the patient should always be in bed. 2nd Attention should be paid to the heat of the body. No good Diaphoresis can be produced when the temperature of the System is above 108°. Cold Water will abstract great heat. — 3rd The temperature of the drinks should be regulated by that of the Body. If the body is cool the drinks should be warm & vice versa. — 4th Sweating should be occasionally suspended, to avoid exhausting the patient. Depletion in this way requires as much Caution, as that by bleeding. 5th The Sheets of the Bed should be often changed. 6th Diluting liquors are not always proper to be given during the operation of Diaphoretics. 7th Sweat should not be checked too suddenly, nor by Cold Air. —

Diaphoretics are Contra Indicated. 1st In very

low state of fever. I have known patients to carry off patients in low Typhus. 2nd. In all cases where they produce no good effects.

January 8th 1808 — Diuretics. 1st External Diuretics, as I shall call them are cold Air, Cold water, Heat, Abstinence, the noise of falling water. The sound of the Bag pipe has been known to produce diuresis. We should avail ourselves of these facts. — Onions applied to the Region of the Pubis, are diuretic. — 2nd. The Internal Diuretics are diluting drinks, as parsley water, Melon seed, Wild Carrot seed &c. — 3rd. Salt of Tartar, Cream of Tartar, the Vegetable Acids &c. are Stimulant Diuretics. They are indicated in dropsical effusions with high morbid action. Heat & abstinence have performed wonders by their Diuretic powers — In fever they are sometimes useful.

Salagoges may be called evacuating & repulsive. They may be divided into two classes. 1st Those which produce a discharge from the Salivary Glands. 2nd Those which act upon the body. — They act by depletion & repulsion. They have been stigmatised as unnatural & Loathsome Medicines. But Salivation is not an unnatural disease. Aphthae in children is an effort of Nature to produce Salivation. It is a bleeding attempt of Nature to cure, though she sometimes kills by it. Spontaneous Salivation has cured Dysentery & Gout. A Lone Mouth marks the Crisis of all autumnal fevers. A Spitting accompanies Mania.

This is so invariable a Symptom, that Maniacs were formerly called Spitators. It is truly Surprising that we should have overlooked those facts so long, & have waited to produce an Artificial Salivation. —

The following act as Auxiliaries to Salivating Medicines. 1st Bloodletting, by lessening Morbid Excitement, which prevents Mercury from having its effect. 2nd Low diet. This acts in this instance, as in preparing the Body for the Small pox. 3rd Emetics These awake the Sensibility & Irritability of the Stomach & Stimulates the Absorbents into action (If Absorption does take place at all) 4th Cold Bath greatly accelerates Salivation. In 1793. I found Cold Water & Ice applied to the Head, very useful in favouring the Action of Mercury. These act by lessening high Morbid Action. Dr. Armstrong goes further than I do, & applies Water to the whole Body. 5th Opium accelerating by inducing Castness. 6th Nitre seems to prepare the Stomach for the Action of Mercury. The Antimonial powder Salivates Speedily, on account of the Nitre it contains. To deranged Persons, Mercury should be given on bread or butter. When the Throat is swelled it is as morbidly as effectual as if the Salivary Glands were affected. Mercury is also used externally in the form of Plasters, friction &c. Here it acts by Sympathy. To remove a protracted Salivation the Remedies

are Bloodletting. Rubbing the Throat externally with Sweet Oil, Blisters, opium &c.

Salivation is indicated in all cases which refuse to yield to diaphoretics or Stimulant Remedies. 2nd. In diseases of the Lungs. 3rd. of the Liver. 4th. joints. 5th. obstinate Diarrhoea. 6th. In external tumours. 7th. Venereal Obstructions. 8th. Convulsive diseases as Tetanus &c. But in this we have to lament that the action of the Sialogogues is so slow that the disease comes to a crisis before they begin to act. In children under six years of age, Salivation is apt to produce Gangrene; also in helpless people above 60 years. — In both cases, it should only be advised as a derivative Resource. Mr. Bogue says that Salivation cannot be excited in Hepatitis after Suppuration has taken place. This is probably the cause of the failure of Mercury in Salivating in Phthisis Pulmonalis. Sialogogues are Contra Indicated in all cases of high inflammatory action.

Errhines. — These are such Medicines as produce a discharge from the Nose. They are of two kinds. 1st. Those which discharge Mucous from the Nose by Sneezing, & those which discharge it without Sneezing. They are Contra Indicated in cases of fullness of the Blood vessels of the Brain.

Expectorants — are first. Demulcents, as Licorice, Plantain Seed Tea, Barley Water, &c. —

2nd Emitting or Transcuting Medicines, as Squills, the
Cacahueta &c. 3rd Stimulating Vapours - These should
be used when the Lungs are Languid. That of Sassa-
parilla thrown on coals and the fumes inhaled. Take
Bran of each half a pint in a quart of Boiling
Water, & the Steam received into the Lungs through an
inverted funnel, forms an excellent Expectoration. 4th
& lastly. Blisters, these act by revulsion. - They are
indicated in Catarrh, Consumption, Pneumoniae.

Emmenagogue. Madec has been much talked
of as an Emmenagogue. Obstructions are either acute
or Chronic, the must judge of the Remedies by the
pulse, which always sympathizes with the state
of the System. In Catamenial Obstructions matru-
mony is an excellent Remedy.

Epispastics are of two classes; 1st Those which
act slowly as Cantharides &c. 2nd Those which act
suddenly as Boiling Water. Make a Teacup with
a Mouth, wide as the Size of the Blister you wish to
make. fill the Cup with a little oil in Boiling
Water, apply it inverted to the part & keep it closely
applied for about ten Minutes, & a fine Blister will
be raised. This mode of Blistering is useful in
many Cases. Epispastics are indicated in diseases of
Moderate Acuteness. 2nd In local Congestions, when
they are not dangerous, the second class is preferred.
They may be often applied on the first or second day
of Pleurisy. Blisters to the Head never draw in Cere-
bral Effusion.

than 24 hrs. Blisters only terminate in Gangrene when applied to the Extremities. Blisters are Contra indicated in Irritable Habits — In persons Subject to Phlegmy. & they should be used with Caution in pregnancy. —

Blisters are calculated to open the fluids of the Body by discharging Pus. Perpetual Blisters are preferable to Letous. I have Cured a Scrophulous Tumor, by a perpetual blister about the Size of a Dollar. They are used in Local Congestions, Eruptions, &c. They are to be healed with great Caution. — I have hitherto spoken of the remedies of Disease in its open or sensible forms. In suffocated Disease nearly similar Medicines are required. Nearly all Sedatives are indicated in suffocated Excitement excepting Cold, when the extremities are so. —

Stimulants. I have seen Stimulants make two classes, 1st Stimulants proper, & 2nd Stimulants. The first are used in Diseases, & the second in Irritable Habits. Stimulants are obtained from the Animal, Vegetable & Mineral Kingdoms. They act by converting excitability into excitement. Whenever Stimulants increase the frequency & diminish the force of the Pulse, it is an infallible Sign that they have been given too soon, & they of course should be discontinued. They remove morbid Action, by exciting a new & more powerful Action. Before Stimulants are given the disease should be removed by the force of your Remedies. This accumulates

I have heard
the Excitability & affords, a greater surface for them
to act on. Doct Sydenham used to exhibit a vomit
or a purge in all Chronic Diseases before giving the
stimulants. Where Excitability, is greatly accumulated,
small doses should be given; but when there is
no accumulation large doses are proper, as there
is very little for them to act on. They are, proper in
the beginning of fail fever. — Do not combine
too many Stimulants. To this rule there are some
exceptions. Stimulants should be used in rotation;
when one has lost its effect by habit, use another,
and when all you have used fail to produce the
desired effect, begin again. The part to which
Stimulants are applied should be varied. when the
Stomach, rejects them, apply them to the Skin, &
by injection. Bark when rejected by the Stomach,
acts as a febrifuge power, when applied to the Skin.
In Health the Excitement & Excitability are
equally diffused over the whole body. — In disease,
they are partial. The Indication of Cure, is to dis-
perse & equalize them.

Moved Action in any part should be re-
moved or translocated to another where it would
be less dangerous. A Natural Rheumatism is to
be cured by an Artificial one. Headache, by cre-
ating a Diarrhoea. A Severe flogging will cure
an insipient Apoplexy. I shall hereafter ap-

-ply these facts to the removal of Pain. Before
you translate Morbid excitement, you must
learn the Predisposition of the Patient. When
Morbid Action becomes languid, renew it, or
translate it to another part. - In doing which,
avail yourself of the Knowledge of Associate
Motions. Stimulate the arms to excite the Legs.
The Skin, to excite the Stomach. The bond of
Sympathy between the Skin & Stomach is too
great to be dissolved readily. In translating Mor-
bid Excitement, you should always take care,
that the part in which you create Morbid Ac-
tion be ess essential to life, than that from which
you translate it. Palsy, in one arm has been
cured by stimulating the other. Synapismus appli-
ed to the ball of the great Toe will remove the
Gout from any other part of the Body. This is the
weakest part, & is generally first affected in this
disease. It tames may be cured by drunkenness. -

The Stimulating passions are useful in some dis-
eases. Hope & Faith have great effect in many
Cases. - And the Arrival of a Friend has turned
the Scale in favour of life in a low State of Fe-
ver. Those Medicines which prevent disease are
Tonics. They remove Predisposing Debility,
1st. We should use them in small doses in Pri-
-mary Debility, then when it is attended with some

I have heard of
Disease. 2nd We should prefer those that are du-
rable, & of those, Aliments are the best. 3rd Such
food only should be used, as is agreeable to the
Stomach, & grateful to the Taste. 4th It should be
taken five or six times a day, and two or three
times in the Night. This is the way to give Medi-
cine & is the way we should give food, when it
is converted into Medicine. 5th A full meal
should be avoided in all cases of Debility.
6th Solid should be preferred to liquid, & salt to
fresh food. — 7th Food not very nourishing should
be used in simple debility. 8th One dish only
should be eaten, whether of Flesh, fish, or
Vegetables. A diet of Milk & Bread has cured Gout
& when we wish to give a limited quantity of food
Eggs & Milk are best. 9th The hours of eating should
be regular.

Drinking is regular, observe that. Here the
Doctor recapitulated his lecture on drinks, from which
see, these notes on Pathology.

January 10th 1805. The Diet should always be
accommodated to the Excitability of the System. 1st
The Excitability be accumulated that sort of Diet
which is not very Stimulating should be used, and
vice versa. Exercise holds a high rank among
the tonic remedies, it is of three kinds —

Active. Passive. & Mixed. Friction, the Cradle,
the Chamber Horse &c. — Friction promotes Peristalsis,
Painless advised. the Daily use of Friction of the
limbs in Cases of Debility. A Farmer, Governor of
this State cured himself of Consumption by rowing
himself up and down the Schuylkill several times
a day. I have known a Consumption in our Hos-
pital cured by swinging. Sailing creates a disease
of the Stomach which dissipates other diseases, and
by shaking the Stomach renders it more fit to per-
form its functions. The Balloon will hereafter
become an excellent remedy. Riding on horse-
back is a mixed exercise. It excites less Excita-
bility than walking, & should be preferred to it.

In a kind of exercise, it should be our
first care to avoid fatigue. The good old rule,
that it should always be accommodated to the State
of the Body? It should never be used before Break-
fast, nor immediately before or after Dinner. Labour
removes Debility when properly conducted. Habitual
Debility is often removed by a Change of Oc-
cupation. Change of Air is also Serviceable. Change
of Diet. It is immaterial what a man has been
accustomed to live on: Change it from bad to
worse. It removes predisposing Debility, & thus by
prevents disease, Change of Exercise. After walking
has brought on Fatigue in a healthy person, if he
will take a Log or something else on his Shoulders

I have heard

and after a while lay it down, he will feel less fatigued, and will be more able to continue his journey. Walking pursuits, after standing, & vice versa. Traveling is an agreeable stimulus; it has several advantages. It presents a constant succession of new & agreeable objects, & removes us from those, with whom we are accustomed to converse concerning our diseases. Change of Climate is very useful in Debility or Disease of weak morbid Action, Life is protracted many years by it. Epilepsy, & even the Stone have been cured by it. Change of Climate has fixed the Teeth in their Sockets, after having been loose, & has renovated the Hair, after having been ~~loose~~ & fallen off. Conversing on our diseases is very injurious. It has converted Schirrhous Tumors into Cancer. Many people have been cured by ceasing to complain. A Gentleman once promised a Lady a Dollar for every day as long as she ceased to complain. The Lady was offended, ceased to complain, & recovered. Mineral waters have been mechanical powerful remedies in all ages & countries. They act by their ingredients, their temperature, & their quality. They act more on Secretion & Excretion when warm, than when cold. The Sea Shore has been highly recommended; but it is very hurtful in great Arterial excitability. The lives of many Patients in this State, have been destroyed by exercise.

Matrimony acts powerfully as a Stimulant & Topic. Charitable Society, & reading pleasant stories are serviceable. We should advise our Chronic Patients to go to bed early, & always at the same hour. The Phlogisticated air, produced by the burning of candles, renders sitting up at night unwholesome. They should always sleep on one side or other. Sleeping on the back produces Incurves. Feather beds relax & therefore induce Debility. A mattress should be used. Blankets are too heavy for covering. Fine down between ticking should be substituted for them. It affords great warmth & is very light. A patient had better be two or three degrees too warm, than one too cold. Flannel should always be worn next the skin, in cases of Debility. Ladies should wear it under their petticoats. A top coat to those who have not been accustomed to it, is of advantage. It rouses the latent excitement, & locks it up in every muscle of the body. Tobacco in its various forms, of Snuff, Pipes &c. is to be used sometimes. But not by those persons who had used them before. In the Management of all these remedies; great care is necessary — Always recollect, Gentlemen, that Debility is the Threshold of Disease.

I have hitherto spoken of that Debility, which allows of Motion. But there are cases in which no Motion can be performed. Asphyxia from cold may be cured by immersing the body in water at its natural temperature. This, though cold, is warm in comparison

I have heard
to the morbid coldness of the Body.

In Gangrene such remedies should be used, as act on the adjoining parts, & enable them to throw off the mortified parts. Dr. Physick has taught us that blisters are the best remedies in Cases of Gangrene. Stimulant remedies are given in four ways. 1st. By the Mouth, 2nd. Anus & by the Skin. Volatile Alkali acts on the whole body by means of the Nose. Dr. has cured psoriasis, tocturnal Eruptions & Gout, by Camphor & Opium in plaster, Applied to the internal parts of the Thighs. I have seen Turpentine &c. act like a Charm in removing dis-eases of the Joints. Tobacco when applied to the Wrists will produce vomiting. Stramonium will have the same effect. A Warm Lint applied for a considerable time has removed Heretic Pain. all external applications act either by Friction, Local Detraction, or by Sympathy.

We will now speak of those Medicines which mix with, and neutralize obnoxious matters. A Calculus in the Vesica Urinaria is dissolved by an Alkali. The Sulphuric Acid is said to be dissolved by uniting with a Calculus Bone.

Medicines which remove Disorders. - Obstructions of all kinds are Disorders. They react & produce disease. Medicines which cure obstructions are called Deobstruents. Arsenic acts powerfully on all obstructions. Certain Forces, as I shall have

cured Peripluza. This has also been done by fear. In
this manner I suppose the Royal touch to act in
curing Peripluza. Much has been said by Doctor
Beddoes & others about the beneficial effects of Cer-
tain Gasses: But they are generally and justly neglected.
Patients apparently relieved by them always relapse.
In Consumption they are said to prepare the way
for Purges. Probably the Nitric Oxide would be serviceable in Morbid
Spasms.

Those Medicines which relieve Pain itself are
sometimes a remedy. There are many instances of
its fatal effects. Death, in Colic, may occur without
inflammation. In such cases, I say, that morbid
Excitement, travelling in force, that which produ-
ces inflammation, & produces Death. Pain in Ner-
vous & Muscular Parts is relieved by Opium; but this
should not be given while there is much Arterial
Action. Fasting prevents pain. Cold water relieves
it in cases of high excitement. Cold Water or Ice,
when applied to the Head in Bladder &c) cure Head
Ache, when it depends on great morbid excitement.

It is a powerful Anodyne in pain from Piles.
Pediluvium in slight indispositions induces Sleep.
Gentle friction with the hand relieves the pain of
Colic. Fear drives away pain, when attended
with high action. Irritating language enables us
to endure Torture without Complaining. This is one
reason why Indians can endure the most excru-
ciating torture with such Fortitude.

I have heard

Since when it depends on great Arterial Action is more rapidly relieved by Bloodletting than by any other remedy. Fasting also, is a remedy for Pain. Certain Demulcents, & turgidness, gentle friction, and producing morbid excitement in another less vital part. These general practices for attendants to advise patients not to complain; but this is a wrong practice. Noise that makes great impression on the ear acts as a gentle Anodyne. You will seldom hear two children cry at once. The one that cries loudest soon silences the other. Warm Water is an Anodyne. The Pediluvium eases Pain. The Application of tight Bandages will sometimes relieve Belly Ache - Head Ache &c. Hallowing or sucking any violent eruption will ease Pain: Human Persons experience relief by groaning. A roll of Sulphur held in the hands, will in certain cases relieve Pain, & a crackling noise will be heard. Metallic Points act in the same manner as Counting 100 backwards. They concentrate the Mind to one Object, & thereby prove Sedative. A few words on the Means of Attaining Longevity shall conclude this part of our Course.

We have seen that Life is the effect of impressions. The secret of preserving it then, consists in the proper Application of Stimuli. They should always be adapted to the Excitability. There are no remedies that can be said to be positively good for any disease. They are only relatively good.

I have heard .

of Fever which are universal,
or affect the whole Arterial System. They are
the

Malignant,
Gangrenous,
Typhus febris,
Synocha,
Synochus,
Typhoid,
Typhus,
Hætic,
Intermittent,
Tubercular.

Of the remedies for preventing the for-
mation of fever, during the existence of its
predisposing debility, or premonitory symp-
toms. They are

1. Fasting.
2. Rest.
3. Gentle Stimulants.
4. Gentle evacuations.

Of the Remedies for fever when formed,
accommodated to the above different States,
or grades. They consist.

1. Of such things as lessen, by the abstracti-
on of Stimulus, the morbid and excessive

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action of the Blood vessels, or excite them when reduced below the point of re-action.

11. Of such, as by acting on the Stomach, bowels, brain, nerves, muscles, and Skin, equalize the excitement of the whole System, & thereby indirectly destroy a weak action in the blood-vessels, by imparting to them a more vigorous & healthy action.

1. The remedies which belong to the first general Head, are

(a) Evacuants. These are

1. Bloodletting.

2. Vomits.

3. Purges & opening clysters.

4. Sweating medicines.

5. Medicines which excite a Salivation

6. Blisters.

(b) Remedies which abstract the Stimulus of heat. These are Colds, in the form of

1. Air,

2. Water, and

3. Ice. also, Abstinence and

all those remedies which abstract the Stimulus of Sound and light, by

4. Darkness

of invigorating passion, by

5. Moderate fear.

Of Motion, by

b. Rest.

Of Acrimony, by

y. Diluting drink, & cleansing.

(c) Remedies which divert local morbid excitement, Congestion, inflammation, & serous effusion from parts that are essential to life in the first degree, to such as are less essential to it. These are all such as are mentioned under the head of evacuants; also

1. Nitre and other neutral Salts.
2. Certain preparations of Antimony.
3. Sugar of lead.
4. Hot glove.

5. Applications to the external surface of the body, of Nitre, dissolved in Vinegar, also Sweet oil.

II. The remedies which belong to the Second general head are Stimulants. These divide themselves, naturally, into such as are internal, and such as are external.

(a) The internal Stimulants may be divided into Medicines & Aliments. The Medicines are

1. All fermentes and distilled liquors.
2. Volatile alkali.
3. Empyumatic & Aromatic oils; also

21. / - - - - -
Certain potent animal & vegetable Substances.

4. Opium.
5. Ether.
6. Bark, & bitters of all kinds.
7. Mercury.
8. Pure atmospheric Air.
10. The invigoration of the Passions & Understanding.
11. Stimulating injections into the bowels.

The Aliments include such vegetable & animal matters as are commonly used in diet, together with Saloop, Tapioca, and the like.

(b) The external Stimulants are

1. Several of the internal Stimulants, so prepared as to be applied to different parts of the body as the nose, the temples, limbs, & the external regions of the Stomach and bowels.

2. The Cold & warm baths, by lotion, or abj-
-sion of the water over the whole body.

3. Blisters.

4. Cataplasms of onions, garlic, & Mustard to the feet.

5. Certain Applications calculated to irritate and inflame the Skin.

6. Cupping.

7. Boiling Water.

of the treatment, proper during the course of the disease from fever.

Of Critical days. These are enumerated by
Sydenham viz. on the 3. 5. 7. 9. 11. 14.
17. 20.

of the Signs which indicate the issue of fever
in life and death. These Signs appear in

1. Partial debility.
2. Pain.
3. General, or partial Heat & cold parts of the
body.
4. Thirst.
5. The Pulse.
6. The tongue.
7. The eyes.
8. The ears.
9. The sense of Touch.
10. The Countenance.
11. Respiration.
12. The voice.
13. Different positions of the body.
14. Different States of Sensibility, & irritability.
15. Different States of Appetite for food.
16. Different States of the bowels.
17. Different States of the Secretions & excre-
ments.
18. Different States of the faculties of the
mind.

Of those States of fever which affect the
whole arterial System, but appear with

greater morbid excitement in some
parts than others. They are the.

Sweating,
Fainting,
Burning,
Cold and Chilly,
Pitcheal.

In which are included,
Intestinal { Diarrhoea,
Dysentery,
Colera Morbus, and
Colic

In which are included,
Pulmonary { Pneumonia,
Catarrh, and
Pulmonary Consumption.

In which are included,
Eruptive { Small Pox,
Measles,
Erysipelas,
Milium pectus,
Chicken Pox, and
Verruquus.

Aggravated

In which are included:
 The malignant Sore Throat,
 The Scarlet fever Sore Throat,
 The Erysipelas & which is, or
 what is called Croup & Diphtheria,
 The different forms of Purplish
 inflammatory Sore Throat.

Rheumatic,
 Arthritic,
 Cephalic, in
 which are included

Chorea,
 Maniacal,
 Leucorrhoea,
 A popliteal, and
 Paralytic.

Septicemic,
 Hypocritic, in which
 are included, effusi-
 on of Water accompanied
 with morbid ac-
 tion in the blood vessels,
 into the

Brain,
 Lungs,
 Cavities of the Thorax,
 Cavity of the Abdomen,
 Ovaria,
 Peritoneum,
 Testes, and,
 Lower Extremities.

Hæmorrhagic, in which
 are included discharges
 of blood accompanied with
 morbid action in the blood
 vessels from the

Nose,
 Lungs,
 Stomach,
 Liver,
 Bowels,
 Kidneys and bladder
 Hæmorrhoidal vessels,
 Uterus and
 Skin.

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Those misplaced States of fever, in which,
from the force of the remote cause, or from
predisposing debility, morbid action is thrown
chiefly from the blood-vessels into other parts
of the body, and is either local or general. They
are.

Hepatic,
Hæmorrhoidal
of Thalmie,
Odonalgia,
Otalgie;
Apthous,
Scrophulous,
Scorbutic,
Hysterical,
Hypochondriacal,
Cutaneous.

Of diseases as they appear in the bloodvessels,
and Nervous Systems (in which are included the
Nerves, Muscles, brain, and Mind), and the ali-
mentary Canal, five dominating more or less,
according to circumstances in each of them.

Apoplexy — Palsy — Cataplexy — Weakness —
Nep — Head ach — Epilepsy — Hysteria —
asthma — Dyspnea — Angina pectoris — Hoop-
sing Cough — Tremor — Convulsions — Tetanus
Chorea — Hiccup — Cramp — Colic — Dearr-
hoea — Costiveness — Dyspepsia — Hypochon-
driasis — Melancholy, or partial Madness —
General Madness — Fatuity — Defect of Logic

of Memory — Dreaming — Phantasmagoria —
Absence of mind — The Operations of the mind
in a trance — Fainting — Asphyxia.

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Dr Rush says Dr Sydenham clearly proves, that
when the Monarchy of a single disease was
not immediately acknowledged, by a sudden
retreat of all contemporary diseases, they were
forced to do homage to it, by wearing its livery.



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